REVISIONS

TO

SAN JUAN RESOURCE AREA

MANAGEMENT SITUATION ANALYSIS

Each of the attached pages supersedes the page with the same number in the San Juan Resource Area's Management Situation Analysis, published in September 1985.

July 1986

TABLE O-2

Summary of Management Opportunities Identified in MSA

Resource Management Program	To Be Resolved Through RMP	To Be Resolved Administratively	Preliminary Potential ACECs Identified
4111 Oil and Gas Leasing (Public Lands)	Evaluate and adjust lands in existing oil and gas leasing categories.	Review known geologic structures (KGSs). Designate additional KGSs where appropriate.	None.
4113 Geothermal Resources Management	Identify lands to be closed to or remain open for geothermal lease (defer until public interest in leasing develops).	None identified.	None.
4121 Coal Leasing	Identify lands to be closed to or remain open for coal leasing. Prepare coal leasing unsuitability study (defer until public interest develops).	None identified.	None.
4122 Tar Sand Leasing	Evaluate and adjust lands in combined hydrocarbon lease (CHL) categories.	None Identified.	None.
4131 Mineral Materials	Identify areas to be closed to or remain open for extraction of mineral materials, and areas to remain open for free use of petrified wood.	Rehabilitate existing unreclaimed abandoned sites. Establish additional community pits.	None.
4132 Mining Law Administration	Identify potential mineral withdrawals or areas not to be withdrawn from mineral entry.	Rehabilitate existing unreclaimed abandoned uranium workings.	None.
4133 Mineral Leasing	Identify lands to be closed to or remain open for mineral lease.	Identify and designate additional known potash leasing areas (KPLAs).	None.

4211 Rights-of-Way	Define areas not to be used for transportation and utility corridors.	Designate transportation and utility corridors.	None.
4212 Lands	Identify parcels for disposal and public purposes.	Propose alternative lands actions where disposal or other long-range actions are precluded. Propose alternative lands actions to resolve unauthorized use or trespass.	None.
4220 Withdrawal Processing and Review	Identify potential withdrawals or areas not to be withdrawn.	None identified.	None.
4311 Forest Management	Define areas for use of various forest products.	Consider alternative means to achieve land treatments to enhance aesthetic values. Consider sequential use of proposed chaining areas. Consider potential for unconventional forest products.	None.
4312 Forest Development	None identified.	Consider forest development projects in areas where forest products are sold.	None.
4322 Grazing Management	Adjust livestock management levels after completion of monitoring (within 5 years after RMP/EIS ROD) or in response to resource conflicts identified in the RMP. Identify allotments for development of allotment management plans (AMPs). Summarize problem areas within specific allotments in RPS, following completion of RMP.	Consider adjustment of allotment boundaries.	Bridger Jack Mesa (3,800 or 5,200 acres) near-relict plant community. Lavender Mesa (640 acres) relict plant community.

TABLE O-2 (Continued)

	Identify, evaluate, and designate areas for special management as areas of critical environmental concern (ACECs) or research natural areas (RNAs) to protect relict plant communities.		
4331 Natural History/ Cultural Resources Management	Identify, evaluate, and designate areas for special management as ACECs, national natural areas, outstanding natural areas (ONAs), RNAs, national natural landmarks, or National Register cultural properties and archaeological districts to protect areas with natural history, paleontological, or cultural resource values. Develop and implement cultural resource management plans using management prescriptions developed in the RMP.	Reorganize staffing, funding, procurement, and program empnases to enhance, protect, and preserve cultural resources. Conduct an areawide natural history/paleontological/ cultural resource inventory and mapping program. Communicate with Indian tribes to safeguard tribal sacred, religious, and cultural sites.	Alkali Ridge (225,000 acres) cultural values. North Abajo (75,000 acres) cultural values. Grand Gulch (4,000 acres) cultural values.
4332 Wilderness Management	Determine how wilderness study areas (WSAs) and instant study areas (ISAs) will be managed if not designated wilderness and dropped from the wilderness review by Congress.	None identified.	(See other resource management programs.)
4333 Recreation Management/ Visual Resources Management	Develop and implement management plans for all SRMAs after completion of RMP, and identify areas to be maintained in each ROS class. Identify and designate additional developed recreation sites.	Reorganize staffing and funding for management of SRMAs. Monitor use and develop facilities within SRMAs.	Dark Canyon PA (62,040 acres) primitive recreation values. Grand Gulch (55,000 acres) primitive recreation values. Bridger Jack Mesa (5,290 acres) primitive recreation values.

	Designate all of the SJRA as open, limited, or closed to off-road vehicle (ORV) use. Identify, evaluate, and approve visual resource management (VRM) classes.	Support the National Park Service (NPS) study of the San Juan River under the Wild and Scenic Rivers Act. Use VRM system in project planning and design.	Lavender Mesa (640 acres) primitive recreation values. Lockhart Basin (56,660 acres) scenic values.
4341 Soil, Water, and Air	Identify areas that could benefit from projects aimed at improving watershed conditions, in cooperation with other resource management programs, through activity plans, AMPs, etc. developed after completion of the RMP. Identify sensitive soils or watershed areas and develop special conditions or watershed management activity plans after completion of RMP.	Collect inventory data to support watershed and air quality studies.	Recapture Dam Drainage Basin (7,000 acres) municipal watershed. Montezuma Creek Drainage (165,000 acres) hazardous watershed conditions. Indian Creek Drainage (25,000 acres) hazardous watershed conditions. 3 Sensitive Soils Areas (Comb Wash, 5,000 acres; Butler/Cottonwood/Recapture Creeks, 42,000 acres; Montezuma Creek/Alkali Canyon, 70,000 acres) hazardous soil conditions. Dark Canyon PA (62,040 acres) air quality values. Grand Gulch PA (37,807 acres) air quality values.
4342 Hazardous Waste Management	None identified.	Conduct an inventory to identify hazardous waste sites, and develop means to meet agency policy regarding rehabilitation of these sites.	None.

TABLE O-2 (Concluded)

4351 Habitat Management (Wildlife)	Identify areas needing special protection and develop special conditions to be applied to other resource use activities. Identify, evaluate, and designate areas for special management to protect significant wildlife habitat values. Identify areas that would benefit from habitat management plans (HMPs), and develop HMP following completion of RMP.	Inspect and maintain existing wildlife facilities.	Hatch Point-Dry Valley Antelope Habitat (34,000 acres) wildlife habitat. Crucial Desert Bighorn Habitat (2 areas) (33,000 acres) wildlife habitat. Aquatic and Riparian Habitats (16 areas) (38,400 acres) wildlife habitat. Crucial Deer Winter Range (7 areas) (152,500 acres) wildlife habitat.
4352 Endangered Species Management	None identified.	Conduct inventories to determine and map the presence and extent of threatened and endangered (T/E) species populations and habitats.	None.
4360 Fire Management	Identify fire suppression areas. Develop action plans to set parameters for different suppression areas, after completion of RMP.	Conduct actions in specific areas to reduce fire hazard.	None.

TABLE O-3

Land Surface Administration (acres)

Jurisdictional Unit	Unit Total (acres)	Agency Total (acres)	Total Acres
FEDERAL OWNERSHIP			3,935,868.52
BLM administered public lands		[a]1,779,193.21	
National Park Service		569,176.34	
Canyonlands National Park (NP)	247,998.47		
Glen Canyon NRA	312,656.38		
Hovenweep National Monument (NM)	440.00		
Natural Bridges NM and	7,445.49		
access road	175.00		
Rainbow Bridge NM	461.00		
U.S. Forest Service		367,006.41	
Manti-LaSal National Forest (NF)	366,853.91		
Baker Ranger Station	152.50		
Navajo Indian Reservation		1,220,492.56	
STATE OWNERSHIP		244,955.22	
State Lands Commission	244,935.22		
State Parks and Recreation	20.00		
PRIVATE INDIAN TRUST LANDS			22,998.31
Ute Indian Allotments	12,297.43		
Navajo Indian Allotments	10,700.88		
PRIVATE OWNERSHIP			[c]335,155.99
Housing and Urban Development[b]	40.00		
BLM[b]	61.89		
Department of Energy[b]	79.54		
Ute Mountain Tribe	840.00		
Navajo tribe	1,280.00		
Other private lands	[c]332,854.56		
TOTAL			4,538,978.04

[a]Includes 3,053 acres of accretion land which is subject to a legal decision in ongoing litigation, and 2,591.94 acres of surface that were transferred out of federal ownership through private exchange in October 1985.

[b]Lands owned by the Federal Government for sole use by a federal agency. These are purchased lands, not part of the public domain, and are not subject to public land use laws.

[c]Does not include 2,591.94 acres of land transferred to private ownership after this table was compiled.

Source: BLM Master Title Plats, December 1984. Surveyed land is measured to the hundredth of an acre; unsurveyed land is estimated to the nearest acre.

TABLE 0-4

Management of Mineral Resources (acres)

ADMINISTRATION OF SURFACE ESTATE		ADMINISTRATION OF MINERALS ESTATE			
Managing Agency or Surface Owner	Acres Total Surface	Acres Federal Minerals by BLM	Acres Federal Minerals by Other Federal Agency	Acres State Minerals by State	Acres Private Minerals by Owner
BLM (Public Lands)	[a]1,779,193.21				
Federal Minerals		[a]1,777,828.21			
State Minerals				1,365.00	
NPS	569,176.34				
Canyonlands NP	(247,998.47)				
Federal Minerals			[b]242,292.49		
State Minerals				5,705.98	
Glen Canyon NRA	(312,656.38)				
Federal Minerals		260,249.60			
State Minerals				800.00	
Indian Minerals			[c]51,606.78		
Hovenweep NM	(440.00)				
Federal Minerals			[b]440.00		
Natural Bridges NM	(7,445.49)				
Federal Minerals			[b]7,445.49		
Natural Bridges NM Access Road	(175.00)				
Federal Minerals			[b]175.00		
Rainbow Bridge NM	(461.00)				
Federal Minerals			[b]461.00		

TABLE O-4 (Concluded)

Managing Agency or Surface Owner	Acres Total Surface	Acres Federal Minerals by BLM	Acres Federal Minerals by Other Federal Agency	Acres State Minerals by State	Acres Private Minerals by Owner
	ADMINISTRATION OF SURFACE ESTATE	A D M I N I S T R A T I O N O F M I N E R A L S E S T A T E			
USFS	367,006.41				
Manti-LaSal National Forest . .	(366,853.91)				
Federal Minerals		366,853.91			
Baker Ranger Station	(152.50)				
Federal Minerals			[e]152.50		
Navajo Indian Reservation	1,220,492.56				
Federal Minerals		51,606.78			
Indian Minerals			[b]1,168,885.78		
State Ownership	244,955.22				
State Lands Commission	(244,935.22)				
State Minerals				244,935.22	
State Parks	(20.00)				
Federal Minerals		20.00			
Private Indian Trust Lands	22,998.31				
Ute Indian Allotments	(12,297.43)				
Private Minerals			[d]12,297.43		
Navajo Indian Allotments	(10,700.88)				
Federal Oil and Gas		1,074.96			
Private Minerals			[c]9,625.92		

Private Ownership	[a]335,155.99				
HUD	(40.00)				
State Minerals				40.00	
BLM	(61.89)				
Federal Minerals		61.89			
DOE	(79.54)				
Federal Minerals		79.54			
Ute Mountain Tribe	(840.00)				
Private Minerals					840.00
Navajo Tribe	(1,280.00)				
Private Minerals					1,280.00
Other Private Lands	(332,854.56)				
Federal Minerals		[a]28,396.32			
Federal Oil and Gas		26,850.86			
Federal Other Minerals[f]		27,687.72			
State Minerals				67,154.12	
Private Minerals					182,765.54
TOTALS	4,538,978.04	2,540,709.79	1,493,382.39	320,000.32	184,885.54

NOTE: Split-estate lands are where the surface estate and minerals estate are managed by different agencies. Federal minerals managed by the BLM will be carried into the RMP; other totals are for information only.

[a]These figures do not reflect 2,591.94 acres transferred from federal to private surface after this table was compiled. The mineral estate remains federal minerals administered by the BLM.

[b]NPS, 250,813.98 acres total.

[c]Bureau of Indian Affairs, exploration and production managed by Farmington Resource Area, Albuquerque District, BLM, 1,178,511.80 acres.

[d]Bureau of Indian Affairs, exploration and production managed by San Juan Resource Area, Montrose District, BLM, 12,297.43 acres.

[e]USFS, 152.50 acres total.

[f]Includes all or some of the following: oil and gas, potash, sodium, phosphate, nitrogen, uranium, thorium, coal, or fissionable minerals.

Source: BLM Master Title Plats, December 1984. Surveyed land is measured to the hundredth of an acre; unsurveyed land is estimated to the nearest acre.

TABLE O-5

Management of Grazing and Recreation Resources (acres)

Public Resource	Acres Administered by SJRA	Acres Not Administered by SJRA
Livestock Grazing		
Public lands within SJRA	1,748,253.21	
Public lands in Grand Resource Area	300.00	
Public lands in Colorado[a]	5,600.00	
NPS lands in Glen Canyon NRA	312,656.38	
TOTAL	2,066,809.59	
Public lands by Grand Resource Area		200.00
Public lands by Colorado[a]		10,200.00
Public lands not within an allotment[b]		20,540.00
TOTAL		30,940.00
Recreation		
Public lands	1,779,193.21	
San Juan River, Joint Management	15,000.00	
TOTAL	1,794,193.21	

NOTE: Acres administered by SJRA will be carried into the RMP; other totals are for information only.

[a]Livestock grazing is managed under a memorandum of understanding with BLM's Montrose District, Colorado, San Juan Resource Area.

[b]Includes acreage alloted to wildlife.

[c]Recreational use of the San Juan River from Mexican Hat to Clay Hills Crossing is managed jointly with Glen Canyon NRA.

Source: BLM Grazing Case Files; BLM Master Title Plats, December 1984.

PLANNING CRITERIA

Planning criteria (planning step 2) are guidelines established to (1) structure development of the RMP; (2) tailor the RMP to the planning issues; (3) avoid unnecessary data collection; (4) avoid unnecessary analyses; and (5) guide estimation of the effects of the various alternatives considered in the EIS. The planning criteria guide agency and public review and explain what will be considered in the RMP/EIS.

The purposes of planning criteria vary at different stages of the planning process. Accordingly, separate criteria were developed to guide the following steps: identification of problem areas in the MSA; formulation of alternatives; and estimation of the effects of alternatives. These were documented in the Preplanning Analysis

Draft planning criteria (based on the preliminary planning criteria) were presented for a 30-day public review and comment period ending April 1, 1985. Changes were made to the draft planning criteria based on the results of public comment and on changes in BLM policy. The final planning criteria are shown in table 0-5.

TABLE O-6

Final Planning Criteria

Planning Criteria in FLPMA

Section 202(c) of FLPMA provides that in the development and revision of land use plans, the Secretary of the Interior shall:

(1) use and observe the principles of multiple use and sustained yield;

(2) use an interdisciplinary approach to integrate consideration of physical, biological, economic, and other sciences;

(3) give priority to the designation of areas of critical environmental concern;

(4) rely on the inventory of public lands, their resources, and other values;

(5) consider present and potential uses of the public lands;

(6) consider the relative scarcity of the values involved and the availability of alternative means and sites for realization of those values;

(7) weigh long-term benefits to the public against short-term benefits;

(8) provide for compliance with applicable pollution control laws; and

(9) to the extent possible, coordinate land use inventory, planning, and management of public lands with the land use planning and management programs of other federal agencies and state and local governments.

At Section 302(b), FLPMA requires the Secretary to manage the public lands so as to prevent unnecessary or undue degradation of the lands.

Because these fundamental planning criteria are required by law, they are not repeated below.

Criteria for Problem Identification

Current resource management practices discussed in the MSA will be identified as problem areas if any of the following conditions occurs:

- existing or proposed management of one resource significantly constrains or curtails existing or proposed use of another resource;
- agency guidance requires land use allocations, which are not now in place, to be made through the planning process;
- existing land use allocations conflict with current agency resource management policies or guidance;
- existing resource management practices conflict with management plans, policies, and guidance of another federal surface management agency; or if
- documented public controversy regarding management of a specific resource value indicates a management concern.

Criteria for Identification of Management Opportunities

The opportunity to change current management practices discussed in the MSA will be identified if any of the following conditions occurs:

- management problems identified under the above criteria can be resolved outside the EIS process through administrative means (these may be carried into the RMP);
- management problems identified under the above criteria can be resolved in alternative ways, with selection through the EIS process (the selected resolution will be carried into the RMP); or if

- current management does not now meet the above problem criteria, but could be improved or resource use enhanced through a change in management (these may be carried into the RMP).

Criteria for Alternative Formulation

The following criteria have been developed to guide formulation of a range of alternatives for each issue to be addressed in this draft EIS. Management problems that do not fall under the issues are resolved in the MSA and carried tnrough the EIS analysis as management actions common to all alternatives.

All alternatives formulated and assessed in the draft EIS will:

- be in accordance with all applicable laws, regulations, and agency policies;

- provide reasonable, feasible, and practical guidance for management of the public lands and resources, without requiring appreciable changes in facilities, services, or scope of management; and

- provide a complete management plan for the entire SJRA.

At least one of the alternatives assessed in the RMP/EIS will provide for each of the following:

- continuing the present management;

- maximizing the use, production or extraction of renewable and nonrenewable resources, including grazing resources, mineral resources, woodland products, and lands (although not necessarily within the same alternative);

- maximizing the development and use of the recreational resource, including motorized and nonmotorized pursuits (although not necessarily within the same alternative);

- minimizing consumptive use of the grazing resource by domestic livestock;

- recognition and protection of sensitive ecological or visual environments;

- designation and protection of areas of critical environmental concern or other special ecological areas (although not necessarily under only one alternative); and

- protection or enhancement of those values on public lands within the resource area which are relatively scarce within the public domain as a whole.

None of the alternatives assessed in the RMP/EIS will consider or provide for the following:

- the designation of public lands as wilderness (the assessment of effects of Congressional designation of wilderness is left to the statewide wilderness EIS);

- except as identified, the designation of specific parcels of public lands as suitable for disposal through sales, exchanges, state indemnity selections, or other means (these types of actions will be considered individually upon proper application; the RMP will be used as a guide to determine whether disposal would serve the national interest, and an RMP amendment will be prepared if necessary);

- the designation of specific parcels of public lands for special use permits, special withdrawals, private Congressional bills, or Congressional withdrawals, whether application is made by another federal agency or by other entities (these types of actions will be considered individually upon proper application; an RMP amendment will be prepared if necessary)[a]; or for

- the development of any coal resources through the unsuitability criteria at 43 CFR 3461. (Coal resources within the resource area are marginal and scattered; coal development is not believed to be economically viable within the next 10 years. If, in the future, coal resources are scheduled to be leased, or if public interest is expressed in development of coal resources, an unsuitability study will be made and the RMP amended, if necessary, as part of its periodic review.)

Criteria for Estimation of Effects

The estimation of effects of each alternative will include the following:

- the impact of management actions upon adjacent federal, private, or Indian lands;

[a]The wording of this criterion has changed slightly due to a change in BLM policy regarding right-of-way and utility corridors.

- the formal land use plans of state and local governments and other federal agencies;

- short-term impacts, or those occurring within 5 years of completion of a given management action (the period of time required for reclamation in SJRA under normal conditions); long-term impacts, or those occurring thereafter; residual impacts, or those remaining 15 years after implementation of a management action; and cumulative impacts, or those which are individually insignificant but become significant when considered together;

- all local economic and social changes caused by each alternative, compared to the continuation of current management practices described in the No Action alternative; and

- the cost to the BLM of implementation, based on current conditions and budgets.

TABLE 4111-1

Oil and Gas Field Production Statistics

	Known Geologic Structures San Juan Resource Area	Other Published Field Names	Approximate Location	Date of Discovery	Public Land Acres	Status (3/1/85)	1983 Production Oil (barrels)	1983 Production Gas (MCF)	Cumulative Production (as of 12/83) Oil (barrels)	Cumulative Production (as of 12/83) Gas (MCF)
1	Alkali Canyon[a]		T37S,R23-24E	1965	6,791	Producing	0	0	3,919	40,085
2	Aneth	Includes Bluff Field	T39-42S, R23-25E	1956	[b]13,642	Producing	6,047,148	5,310,813	325,587,105	308,761,044
3	Black Steer[c] Canyon		T39S,R25E	1984	160	Producing	N/A	N/A	29,289	39,100
4	Bluff Bench I[d]		T40S,R22E	1957	40	Abandoned	0	0		
5	Bluff Bench II[d]		T40S,R22E	1957	40	Abandoned	0	0	16,436	7,526
6	Bluff Bench III		T40S,R21E	1959	40	Abandoned	0	0		
7	Bradford Canyon		T37S,R24E	1983	1,920	Producing	3,634	17,078	15,015	57,056
8	Broken Hills		T40S,R22E	1959	7,923	Producing	2,039	656	104,437	55,968
9	Bug		T35-36S,R26E	1983	3,542	Producing	192,768	333,602	959,595	1,581,423
10	Cave Canyon[a]		T37-38S,R24E	1984	925	Producing	N/A	N/A	9,247	18,135
11	Cowboy		T39S,R22E	1968	840	Producing	5,769	0	147,522	108
12	Grayson		T38S,R22E	1961	40	Abandoned	0	0	6,441	5,331
13	Horsehead Point[a]		T36S,R25E	1984	2,490	Shut-In	N/A	N/A	0	3,500
14	Mexican Hat		T42S,R19E	1908	2,640	Producing	6,664	0	56,948	316
15	Mustang		T36S,R33E	1983	1,760	Producing	829	20,690	50,425	291,115
16	North Lisbon	Lisbon	T29-30S,R24E	1960	8,639	Producing	629,493	20,117,430	44,656,584	409,128,511

17	Patterson Canyon	Little Nancy	T37-38S,R25E	1981	9,565	Producing	42,928	193,550	87,915	424,595
18	Recapture Creek		T40S,R23E	1956	1,640	Producing	49,391	154,398	1,842,582	2,665,060
19	Squaw Canyon	Tin Cup Mesa	T38S,R25-26E	1980	4,800	Producing	32,201	92,918	196,262	406,583
20	Turner Bluff I		T40S,R22-23E	1957	1,988	Producing	28,070	11,440	524,713	535,593
21	Turner Bluff III		T40S,R22-23E	1963	360	Producing	18,496	14,230	93,039	44,578
22	Unnamed	Little Valley	T30S,R25E	1961	1,000	Producing	9,309	1,029,204	90,806	9,300,921
23	Unnamed[e]	SW Lisbon	T30-31S,R24E	1981	372	Shut-In	0	0	522	0
24	Unnamed[f]	Johnson Ck.	T35S,R22E	1983	640	Abandoned	0	0	425	0
25	Unnamed	Hatch	T38S,R24E	1957	360	Abandoned	0	0	15,446	40,891
26	Unnamed	Black Mesa	T39S,R21E	1962	40	Abandoned	0	0	2,640	0
27	Unnamed[g]	Hovenweep	T39S,R25E	1981	1,440	Shut-In	0	0	0	0
28	Unnamed[h]	Lime Ridge	T40S,R20E	1958	40	Abandoned	N/A	N/A	N/A	0
29	Unnamed[i]	Butler Wash	T40S, R21E	1959	40	Abandoned	0	0	603	0
TOTALS					73,717		7,068,739	27,296,009	374,497,313	733,291,049

NOTE: MCF = 1,000 cubic feet.

[a]Field back on production, March 1984.

[b]Total KGS is 69,576 acres; 13,642 acres are on public lands managed by SJRA, and 55,934 acres are on the Navajo Indian reservation and are managed by the Farmington Resource Area, Albuquerque District, BLM.

[c]Cumulative production as of January 1985, since field discovery.

[d]Combined cumulative production.

[e]One-well oil field; initial production 12 barrels per day.

[f]One-well oil field; initial production 6 barrels per day.

[g]Gas field never produced; initial production 4.7 million cubic feet per day.

[h]Never produced; high CO_2 potential; initial production 1.45 million cubic feet of gas per day.

[i]Field watered out.

Sources: DOGM, 1984; Riggs, 1978; and internal BLM oil and gas records.

TABLE 4111-2

Oil and Gas Leasing Category Acreages and Protected Resources for Public Lands and Other Federal Minerals Administered by the San Juan Resource Area

	Values Protected (acres)					
	Bighorn Sheep	Recreation	Deer	Sage Grouse	U-95 Scenic Corridor	Total
Public Lands Administered by SJRA						
Category 1	NA	NA	NA	NA	NA	891,310
Category 2	[a]68,737	329,904	216,191	0	[a]2,340	617,172
Category 3	[a]27,075	85,325	0	1,720	0	114,120
Category 4	[a]20,731	134,495	0	0	0	155,226
TOTAL						1,777,828
Public Lands in White Canyon STSA						
Category 1	NA	NA	NA	NA	NA	3,078
Category 2	2,281	0	0	0	2,340	4,621
Category 3	120	0	0	0	0	120
Category 4	0	160	0	0	0	160
TOTAL						7,979

Other Areas of Federal Mineral Acreage Administered by SJRA

Glen Canyon NRA	
Federal acreage open to mineral leasing by NRA Minerals Plan	101,718
Federal acreage closed to mineral leasing by NRA Minerals Plan	158,532
Total acreage open to the mineral leasing laws	260,250
Manti-LaSal NF	
Federal acreage open to the mineral leasing laws	366,854
Navajo Indian Reservation	
Federal acreage open to the mineral leasing laws	51,607

[a] ...

RESOURCE ALLOCATIONS

Tar sand development can take place on oil and gas leases issued after passage of the Combined Hydrocarbon Leasing Act of 1981 (November 16, 1981). On leases issued prior to that, tar sand development can take place only on a CHL in an STSA. STSAs were identified by USGS and created in 1980 and 1981 to facilitate conversion of oil and gas leases to CHLs. CHLs are subject to category restrictions, similar to oil and gas leases.

CURRENT MANAGEMENT PRACTICES AND PLANNING GUIDANCE

Tar sand is not now actively managed within the SJRA. Although there is an upward trend in tar sand development within Utah, and the development of the technology necessary to extract the hydrocarbons from tar sand was in the beginning stages in 1984, industry has shown no interest in the tar sand within the SJRA.

White Canyon STSA, an area of approximately 10,469 acres, was established by USGS on November 10, 1980. Within the STSA, 2,400 acres are State lands and minerals, 90 acres are private lands and minerals, and the remaining 7,979 acres are public lands and minerals. Only federal minerals are subject to CHL requirements. Holders of oil and gas leases and mining claims within the STSA at the time of the designation were granted an opportunity to convert their holdings to CHLs between November 1981 and November 1983. Leases could be converted upon written application and the submission of a plan of operations that presented the details of an exploration plan for assessing the tar sand deposit. No applications for conversion were received for the White Canyon STSA. Any future leases within the STSA after the present leases expire will be CHLs obtained through competitive bonus bidding. A total of 70 acres of the STSA is in category 3 or 4; the remainder (about 7,910 acres) is in category 1 (open to leasing).

Wilderness IMP could restrict tar sand development in the resource area, because there is an overlap of approximately 15 acres between the White Canyon STSA and Dark Canyon ISA. However, there is no current conflict between the ISA and the STSA, because of the lack of demand to develop the White Canyon deposit.

Current planning guidance is silent on tar sand management. None of the current MFPs address tar sand. The White Canyon STSA was briefly addressed in the statewide tar sand EIS (BLM, 1984c).

SOCIOECONOMIC CONSIDERATIONS

There is no current (1985) exploration, development, or leasing of tar sand in the resource area. Therefore, no social or economic considerations have been identified.

CONSISTENCY WITH NON-BUREAU PLANS

No non-Bureau management area within the boundaries of SJRA has a known tar sand deposit; therefore, non-Bureau plans will not be analyzed here.

CONSTRAINTS FROM OTHER RESOURCE MANAGEMENT PROGRAMS

Of the 7,979 acres in the White Canyon STSA, 160 are closed to leasing because of the Dark Canyon PA, and another 120 are subject to no surface occupancy to protect desert bighorn sheep habitat. Special leasing conditions are applied to a total of 4,621 acres to protect desert bighorn sheep habitat on 2,281 acres and the Highway U-95 scenic corridor on 2,340 acres. These leasing category restrictions would be expected to have a very minor effect on the leasing and development of the STSA as a whole if this tar sand deposit should become valuable.

DOCUMENTED PUBLIC CONTROVERSY

None.

4131 MINERAL MATERIAL

CURRENT MANAGEMENT SITUATION

LIST OF OVERLAYS

Salable Minerals.

RESOURCE OVERVIEW

Salable minerals are present in most of the SJRA. Clay, building stone, topsoil, blow sand, decorative stone, petrified wood, and gravel are all salable commodities found within the resource area. The majority of these commodities are in abundant supply but are rarely in demand, and their primary function is as landscape and scenery. Sand and gravel applications make up 99 percent of the mineral materials workload for the resource area. The currently utilized deposits of sand, gravel, and clay are shown on the Salable Minerals overlay.

Materials of the salable mineral class have been in use in the SJRA since the time of the Anasazi Indians, when rectangular sandstone blocks were used as the principal building material for homes and storage structures. In more recent times and even today salable minerals are used in all roads and buildings constructed or maintained within the resource area.

The sand and gravel in the resource area come from two main sources: around the base of the Abajo Mountains and along the course of the San Juan River (cross-reference: Topography, Part I). Material originating on the Abajo Mountains is predominantly made up of igneous diorite cobbles in a sandy clay matrix. San Juan River cobbles are predominantly quartzite that has traveled from the San Juan Mountains in Colorado. The river material is very hard and of good quality, while the Abajo material is much softer and not adaptable to as wide a range of uses. In areas where neither of these sources of material is available, sandstones are excavated and crushed for a possible substitute (cross-reference: Geology, Part I).

MANDATES AND AUTHORITIES FOR RESOURCE MANAGEMENT

The Mineral Materials Act of 1947.

The Multiple Surface Use Act gave the Department of Interior the authority to manage surface resources on mining claims, and defined common vs. uncommon mineral varieties.

The Act of September 28, 1962 provided for disposal of petrified wood.

Mineral materials disposal regulations are found at 43 CFR 3600 and 43 CFR 3700.

RESOURCE ALLOCATIONS

Mineral materials are allocated through sale or free use permit. These are in response to public demand and cannot be anticipated through the planning process.

CURRENT MANAGEMENT PRACTICES AND PLANNING GUIDANCE

There are presently seven designated community pits for sand and gravel within the resource area, and there are plans to establish at least two more. The community pits were established to ensure a continuous supply of material in strategic geographic locations, where all conflicts with other resources have been resolved before material applications are received.

Actual sales, free use permits, and production of sand and gravel for 1983 and 1984 are shown in table 4131-1. Table 4131-2 compares sand and gravel production from private, state, and federal lands in San Juan County. Current information about active mineral material permits is available in the resource area files for sales and free use and on the microfiche record of outstanding cases supplied by the Denver Service Center, BLM. The locations of current material sales, material site rights-of-way, free use permits, building stone quarries, and community pits are shown on the Salable Minerals overlay.

There has been no recorded production of petrified wood, building stone, or topsoil from the resource area during FY 1983 and 1984, but approximately 6,000 cubic yards of clay and other fill material was produced during that time period. Some applications for purchase of building stone were rejected during those two years because of conflicts with mining claims. Disposals of all of these materials occur in the same manner as for sand and gravel: sales or free use permits to applicants. Small quantities of petrified wood (25 pounds per day, not to exceed 250 pounds per year) may be removed by individuals for personal use, free of charge and without a permit.

The Montezuma MFP, dated 1973, recorded a decision that no community pits should be established within the planning unit because of local opposition from contractors who were supplying material from private land. The South San Juan MFP (approved 1973) recorded a decision to establish community pits for public use in the Mexican Hat area.

SOCIOECONOMIC CONSIDERATIONS

San Juan County is the primary impact area for salable mineral activities within the SJRA. Although public land related activities can affect other areas in southeastern Utah and southwestern Colorado, the preponderance of effects for most activities is confined to San Juan County, on which the following discussion concentrates. For a more complete description of the methodologies and assumptions used in this chapter, refer to the Economic Methodology section in Part III.

Withdrawals of land from appropriation under the mining laws are governed by Section 204 of FLPMA. Withdrawals of public lands can be made only by the Secretary or by Congress. A withdrawal generally covers a large area of land set aside for a specific purpose, such as CNP. The land is withdrawn from mineral entry to protect certain resource values from the effects of mining or to prevent the land from passing from federal ownership through patent. While it is beyond the discretion of the Area Manager to make withdrawals, the RMP can serve as a basis for recommendations from the resource area through administrative channels that lands be withdrawn from mineral entry.

CURRENT MANAGEMENT PRACTICES AND PLANNING GUIDANCE

There are approximately 50,000 unpatented mining claims within the SJRA, although claims are continuously being located or abandoned. Current information about mining claims can be found on the BLM microfiche produced by the USO and available in the District and SJRA offices. Information about individuals and companies active in mineral exploration and production can be found in the resource area mining files.

Because mining claimants have the right to prospect for locatable minerals and locate mining claims without governmental approval, BLM's management is minimal. Mining claim recordation and adjudication are handled at the USO level, and the resource area is not involved. Appeals of adjudication are heard by the IBLA without resource area involvement. Resource area personnel process notices of intent or plans of operation to ensure that surface disturbing activities on mining claims are conducted in a manner that will prevent unnecessary or undue degradation and protect nonmineral resources on public lands. Resource area personnel would be involved in validity examinations if a claimant applied to take a claim to patent.

Mining claims on the Manti-LaSal National Forest are managed by the USFS in much the same way as they are managed by BLM on public lands. BLM's USO handles recordation of mining claims located on USFS lands, and the DOI has paramount responsibility for these claims. The USFS processes notices of intent and plans of operation for mining or exploration on mining claims and initiates any contest complaints against the claims (36 CFR 228). The IBLA hears appeals by mining claimants as a result of either BLM adjudication or USFS contest against a claim. The SJRA has essentially no involvement in the management of mining claims that have been located on USFS lands.

CNP has been withdrawn from mineral entry, and there are presently no mining claims located within the park. Claims in existence at the time the park was established (1964) have been either dropped by the claimants or invalidated through court proceedings. Access to mining claims that lie outside the park can be obtained through the park only on designated roads, on foot, or on pack animals.

GCNRA presently has no mining claims. The act that established the recreation area made all mineral commodities leasable, with leases to be administered by the BLM. Applications for mineral leases would be submitted to BLM and would

Although there has been significant uranium/vanadium mining in the county, currently there is no such activity in the SJRA, and there has been no such activity since 1982. The only uranium/vanadium activities having local economic effects are expenditures associated with exploring and developing mining claims.

Gold exploration and production is and has always been a minor industry in San Juan County (see table 4132-1). The industry accounts for fewer than 10 jobs, all of which can be attributed to mining within the SJRA.

There are approximately 50,000 mining claims on public lands in the SJRA. If the statutory minimum of $100 per year of assessment work was completed for all 50,000 claims, a minimum of $5,000,000 was spent to assess and develop mining claims in the SJRA in 1984. However, during 1984 only 17 notices and 2 plans covering 601 claims have been submitted to the SJRA. All surface disturbing assessment work requires either a notice or plan (43 CFR 3802 and 3809). The type of assessment work which does not require surface disturbance (for example, geologic mapping or geochemical work) is allowed for only 2 years. Most assessment work could therefore be expected to involve some surface disturbance. The large discrepancy between the number of claims and the claims covered in the submitted notices or plans implies that most assessment work is a paper exercise with no associated economic output or transaction, although it is possible that some operators conduct assessment without submitting the proper notices. Based solely on the notices and plans received, which ignores some non-surface disturbing expenditures, approximately $480,000 was spent on assessment work in the SJRA. These local expenditures, including their direct, indirect, and induced effects, generate 14.2 jobs and $252,874 personal income earned in the county.

Some of the governmental cost related to managing locatable minerals within the SJRA also contributes to local sales, and therefore to income and employment. These local governmental expenditures generate an estimated 0.7 jobs and $10,000 of personal income (see table 4132-3).

In addition to the income and employment effects, locatable mineral activity within San Juan County affects both the revenues and costs of local taxing jurisdictions. Related sales, property taxes, and intergovernmental revenue sharing bring an estimated $1,510,000 to local taxing jurisdictions (see table 4132-4). Only a small portion of these revenues are from activities on public lands within the SJRA. These revenue figures are thought to be conservative, as they do not account for all related revenue sources.

Jurisdictional costs could not be delineated and quantified.

CONSISTENCY WITH NON-BUREAU PLANS

The USFS Final Environmental Statement and Land Use Plan for the Monticello Planning Unit, Manti-LaSal National Forest, was approved April 17, 1976. (A new forest plan is due out before the MSA is final). Under USFS management, mining exploration is treated in the same manner as exploration on public lands.

mining claims themselves represent an irreversible and irretrievable commitment of resources for as long as a mining claimant retains an interest in the claims by meeting the filing and assessment requirements. The claimant has an inherent right to explore for and remove mineral commodities and to patent the surface if the claim can meet the patent requirements.

MANAGEMENT OPPORTUNITIES

The SJRA can work toward the eventual rehabilitation of some old, abandoned uranium workings, particularly if they are associated with currently ongoing projects. Mining claimants who are waiting for a price recovery to resume mining would consider many of the old workings to be only temporarily abandoned. This opportunity can be realized at an administrative level in response to site-specific proposals, and is not dependent upon the RMP process.

Areas where conflicts are identified between mining of locatable minerals and other surface resource values can be withdrawn or segreated from mineral entry. Segregations are made by Departmental order, but can be recommended to resolve resource management conflicts identified in the RMP. Withdrawals cannot be made through the RMP, but the RMP can serve to identify areas where withdrawal would be in the best national interest and to recommend withdrawal of these areas. The RMP can also serve to identify areas where it is in the best national interest not to withdraw or segregate locatable minerals from entry.

ACEC POTENTIAL

No potential ACECs have been identified for locatable minerals in the SJRA. The locatable mineral resource is not believed to require special management to protect critical environmental concerns. The resource value of the in-place locatable mineral deposit does not fulfill the criteria of significant relevance and importance (43 CFR 1610.7-2).

CONSTRAINTS FROM OTHER RESOURCE MANAGEMENT PROGRAMS

Exploration for locatable minerals is somewhat hampered by the necessity to avoid cultural resources. The BLM has no authority to approve or disapprove a notice of intent. However, BLM could assert that surface disturbance which would result in damage to an archaeologic site constitutes unnecessary or undue degradation. If possible, the site would then be avoided. If avoidance is not possible, the site could be destroyed. Where the BLM has funds for mitigation, the work must be completed within 30 days of site determination. Inability to complete mitigation within 30 days is not sufficient grounds to stop the project or to withhold approval of a plan of operations. No serious conflicts have arisen between cultural sites and chosen exploration sites so far, but there could at any time be a drill site that an exploration company feels cannot be moved to avoid archaeological sites.

Exploration for uranium within Squaw Canyon WSA in 1983 was hindered because of IMP. Because of IMP, the owner of the locatable mineral interest within the WSA arranged to perform yearly assessment work on a portion of the claim

block that extended outside the WSA boundary. IMP has effectively closed the WSA to further evaluation of the mining properties that would cause surface disturbances within the boundaries of the WSA. If the Squaw Canyon area were not under IMP, the mineral owner would be free to cause reasonable surface disturbance in order to evaluate the existing mining properties.

Yearly uranium exploration activity has taken place within dropped portions of the Cheesebox Canyon inventory unit for 1980 through 1984. These areas were not included in the final WSA boundaries, but operations were conducted under IMP until 1983. Although no activity has been stopped because of IMP, these actions are scrutinized more closely than usual to make sure none of the activity crosses into the WSA.

Mining claim access and uranium claim development in 1976 and 1977 on the Mancos Mesa WSA resulted in an impairment of wilderness values. The activity occurred before publication of either the BLM's wilderness inventory guidelines or IMP requirements.

No other WSAs within the SJRA have had mining claim assessment or development operations under IMP.

DOCUMENTED PUBLIC CONTROVERSY

None.

Therefore, areas encompassing these anticlines are the most favorable for potash occurrence and mining (Hite, 1961; Dames and Moore, 1978).

The potential for occurrence of potash in the SJRA is shown on the Potash Favorability overlay. The KPLAs have a high favorability for potash occurrence (see the sections on resource allocations and current managment practices and planning guidance in this chapter). All of the SJRA east of the edge of known potash deposition in the Paradox Basin has a moderate favorability for potash occurrence. Criteria used to determine potash favorability are given in Appendix 4133-A at the end of this chapter.

Due to the depth and undulating nature of potash deposits in the Paradox Basin, solution mining is the most likely method of development. In this method, water is injected to induce solution of potash. The solution is then circulated to the surface and the potash is precipitated out of the solution. The quantity of water needed to produce a potash-rich solution is very large for a commercial operation. The only producing potash mine in the Paradox Basin is Texas Gulf's solution mine in Grand County near Moab, which requires up to 3,000 gallons of water per minute.

MANDATES AND AUTHORITIES FOR RESOURCE MANAGEMENT

The Act of February 25, 1920, as amended (the Mineral Leasing Act);
The Act of February 7, 1927 (the Potasn Leasing Act);
BLM Mineral Resources Policy; and
Regulations found at 43 CFR 3500

RESOURCE ALLOCATIONS

Potash is allocated through a potash lease. A lease may be issued either within or outside of a KPLA. Exploration may be done outside a KPLA under a prospecting permit. If commercial quantities of potash are discovered, a preference right lease is issued.

BLM would designate a KPLA where there is evidence that the presence of a commercially workable potash deposit can be established without prospecting. Within a KPLA, competitive leases must be issued. The KPLA evaluation is based on geologic information and data from drilling and mining. Within the SJRA, data are available for certain scattered areas, principally from well logs, and are not available for the remainder of the area. Lack of budget and staffing, along with lack of interest in potash leasing, has delayed evaluation of available data to determine if areas do or do not qualify as KPLAs. The BLM Moab District Minerals Division anticipates that such an effort will get underway within the next 5 years, prior to 1990. Any KPLAs determined will be taken into account during the periodic review of the RMP.

CURRENT MANAGEMENT PRACTICES AND PLANNING GUIDANCE

Potash is not now actively managed within the SJRA. Although the mineral resource is present, there is no indication of industry interest in potash development.

leave federal ownership. Withdrawals remain in effect until specifically revoked. While it is beyond the discretion of the Area Manager to make withdrawals, the RMP can serve as a basis for recommendations from the resource area through administrative channels that lands be withdrawn from certain uses or appropriations (cross-reference: Mining Law Administration, Part II).

Certain authorizations respond to public demand for specialized uses of the public lands of a more or less temporary nature. Examples are right-of-way grants and land use permits. These do not cause the lands to leave the public domain, although they may restrict or benefit certain uses. They may be for a set period of time or may be open-ended. They tend to cover small, scattered areas, and cannot be anticipated through the planning process.

Disposal actions usually respond to public requests or applications. They result in a title transfer, and the lands leave the public domain. Examples are state indemnity selections, private or state exchanges, desert land entries, public sales, or mineral patents. Disposal may be contingent upon the recipient's meeting certain conditions, such as in an R&PP patent, or may be absolute, as in a sale. Tracts can be identified for disposal, and specifically disposal under certain authorities, through the planning process.

CURRENT MANAGEMENT PRACTICES AND PLANNING GUIDANCE

Lands actions are managed under one program, but are charged to three subactivity codes. Prior to FY 85, these codes were 4211 Energy Realty, 4212 Nonenergy Realty, and 4213 Withdrawal Processing and Review. Energy realty was set up to process energy minerals related rights-of-way, primarily under Title V of FLPMA and the Minerals Leasing Act of 1920. Nonenergy realty processed other rights-of-way and other types of lands actions. Withdrawal processing and review was established to conduct the withdrawal review mandated by Section 204 of FLPMA. Until FY 85, withdrawal review focused on BLM withdrawals only, and was handled at the USO and MDO level with input from the resource area.

With FY 85, subactivity codes have changed to group nonenergy and energy rights-of-way under 4211 Rights-of-Way. The remainder of lands actions fall under 4212 Lower 48 Lands Program. Withdrawal processing and review remains separate, but the code number has changed to 4220. With FY 85, the resource area office is scheduled to perform this function. Withdrawals held by other federal agencies will be examined at the rate of one agency per year. The schedule is fixed by USO in cooperation with the other agency, and is beyond the discretion of the resource area to change.

The primary objective of the lands program in the SJRA is to provide the public with the land it needs for rights-of-way, land use leases, or sales. The secondary objective is to provide support to other programs to protect and enhance the resources. The final goal of these two objectives is achieving a balance between land use and resource protection that serves the public at large.

(1) if it is isolated and uneconomical to manage, and is not suitable for management by another federal department or agency; or

(2) if the land was acquired for a specific purpose and is no longer needed; or

(3) if disposal of the land will serve an important public objective.

Of the isolated tracts of land identified for disposal in previous BLM plans, only two have actually been offered for sale. Specifically, other resource uses (i.e., KGSs for oil and gas, mining claims, and cultural resources) have prevented the sale of these tracts. The Land Use overlay shows those lands that are unsuitable for sale. These are parcels that have been investigated and found to be in a KGS or have an abundance of cultural resources. Those parcels encumbered by mining claims are subject to change continually and are not mapped.

Unauthorized uses in the resource area are primarily in the form of agricultural trespass. These uses are usually adjacent to private farmland and are generally considered to be inadvertent or unintentional. Because of lack of BLM funding, there is no active program to eliminate these unauthorized uses. Because no inventory has been completed to identify the specific parcels involved, they cannot be mapped.

Certain hazards have been identified in the resource area as a result of past land use activities. All identified hazards are areas that were heavily mined prior to the passage of FLPMA. Open mine shafts and old mining equipment may pose a hazard to the public at large. The hazards are generally found in the geographic areas of White, Red, Montezuma Creek, and Coalbed Canyons and South Cottonwood Wash, but have not been mapped.

Current planning gives direction for certain broad objectives and for many site-specific actions. Most have been done. Those still pending are as follows.

The South San Juan and Montezuma MFPs recommended that lands adjacent to communities be made available for community expansion. A problem remains at Mexican Hat. All four MFPs recommended state exchanges to block state and federal ownership, to eliminate scattered tracts. One such exchange was completed in the Montezuma Planning Unit in 1977. Blocking of state and federal lands in the remainder of the resource area is now being considered in a different form through Project BOLD (UDNR, 1982). The Montezuma MFP recommended acquiring 640 acres of state land adjacent to Hovenweep National Monument to transfer to the NPS. The NPS has not submitted a proposal for such action.

The Montezuma and Indian Creek-Dry Valley MFPs identified tracts as suitable for sale. Only two have been offered for sale, but these were not sold because of lack of public interest. The remainder cannot be sold because of legal constraints (e.g., cultural resources and mining claims). The Montezuma MFP recommended providing rights-of-way for water projects to promote agricultural development. Providing for agricultural development and

expansion is an ongoing concern in the resource area, either through lease, desert land entry, or other means, and is done on a case-by-case basis.

The Indian Creek-Beef Basin and Montezuma MFPs recommended study of proposed or existing road rights-of-way to reduce the proliferation of roads; the Montezuma MFP made a similar recommendation for mineral materials sites (cross-reference: Mineral Material, Part II). The South San Juan and Montezuma MFPs recommend designation of utility corridors. De facto corridors have formed.

Two plan amendments for disposal purposes (exchange and sale) over the past 5 years (since 1979) have been generated by lands actions in response to specific lands applications or requests not covered in the MFPs.

In general, the relevant direction from the four MFPs is to provide lands for agricultural development, community expansion, and land sales.

IMP precludes lands disposal actions in WSAs or ISAs. Short-term uses including right-of-way grants are allowed if they meet the nonimpairment criteria. Rights-of-way, even impairing, must be allowed if providing access to inheld areas with valid existing rights. Examples would be inheld pre-FLPMA oil and gas leases or state and private inholdings.

To date, lands actions under IMP have occurred only in the Road Canyon WSA. A right-of-way was granted to an inheld state mineral lease, but the access road was never built. Issuance of the grant was upheld by IBLA in Utah Wilderness Association, 80 IBLA 64 (March 30, 1984), but the IBLA decision was vacated by District Court and the case dismissed, since Shell Oil relinquished the right-of-way.

SOCIOECONOMIC CONSIDERATIONS

The following discussion concentrates on San Juan County, which is the primary impact area. Although public land related activities can affect other areas in southeastern Utah and southwestern Colorado, the preponderance of effects for most activities is confined to San Juan County.

For a more complete description of the methodologies and assumptions used in this chapter, refer to the Economic Methodology section in Part III.

The local importance of the lands program is determined by the land uses with the lands actions and the alternative land uses without the lands actions. If the land use is identical with and without a lands action, then the action is neutral with respect to the local economy.

Lands actions are initiated either in support of other BLM resource management programs or in direct response to public demands.

Table 4211-5 lists the past lands actions that have supported other programs and the economic activities enhanced through these actions. In general, these support lands actions have enhanced recreation.

TABLE 4211-5

Lands Actions Supporting Other Resource Management Programs

Lands Action and Site	Acres	Economic Activity Enhanced
Classified Lands		
Dark Canyon	57,430	Recreation
Grand Gulch	32,850	Recreation
Sand Island	254	Recreation
Arch Canyon	40	Recreation
Kane Springs	80	Recreation
Salt Creek	240	Recreation
Alkali Ridge	80	Recreation
Mormon Trail	1,116	Recreation
Butler Wash	40	Recreation
Withdrawals		
Public water reserves	5,460	Energy Development
	97,590	

The 92,130 acres of classified lands (1.8 percent of the county acreage) are closed to entry under the public land laws (including the general mining laws, but not the mineral leasing laws). Actions that would not be allowed in these areas include, but are not limited to, desert land entries, sales, R&PP patents, private exchanges, and mining claims.

Numerous actions can still be allowed on these classified lands, including, but not limited to, rights-of-way, land use permits, and leases. This would allow the construction of several types of capital investments and the exploration for and development of leasable minerals.

It is impossible to quantify the local employment and income indirectly generated or foregone through these lands actions.

The economic significance of lands actions supporting public demands varies and depends on the use to which the land is put and on the alternative land use foregone. Table 4211-6 lists the various lands actions responding to outside demands and those economic activities enhanced through these actions.

Economic activities are heavily restricted in the national parks, and heavily regulated on the Navajo Indian reservation. Except for uses that require some kind of disposal action, land uses under USFS management are similar to those under BLM management. FERC withdrawals do not restrict activities within the withdrawal area; however, these withdrawals may restrict long-term capital investments, since owners of capital investments would not be compensated for any loss if the sites were developed for hydroelectric power.

The degree to which other resource uses and related local employment and income are foregone due to past withdrawals could not be quantified. The USFS and FERC withdrawals have probably had little economic effect; however, the amount of land managed by NPS and the BIA as a result of agency withdrawals may have significantly affected the composition of the local economy, and possibly total economic activity.

The lands program also responds to outside demands for municipal, residential, agricultural, and industrial land uses through rights-of-way, sales, desert land entries, agricultural leases, exchanges, and R&PP leases and patents.

Community and privately owned or controlled land is essential for municipal, residential, agricultural, and industrial development. Table 4211-7 gives a breakdown of private lands by land use. Municipal and residential land uses are necessary to provide for the infrastructural and residential needs of county residents. Agricultural land uses are required to sustain the agricultural sector, the importance of which is discussed in 4322 Grazing Management. Other industries also require land, although to a lesser extent; the area's economy, as any other economy, is entirely dependent on its industries.

Table 4211-8 lists the various lands actions responding to residential, agricultural, and commercial demands and the economic activities enhanced through these actions. Although the local economy would not have differed significantly had these actions not taken place, these actions have reduced the costs of several infrastructural developments, allowed the construction of

CONSISTENCY WITH NON-BUREAU PLANS

Local planning consists of the 1968 San Juan County General Plan, which is written in broad terms and zones the county lands into general categories. Under current BLM policy, both the San Juan County Commission and the Governor are asked to provide consistency review of each major lands action contemplated. The Commissioners are invited to comment on each individual action as it relates to county development. The Governor is asked to review plans and planning amendments for consistency with state or local plans, policies, or programs (43 CFR 1610.3-2(e)).

The current planning of the USFS and NPS do not directly affect lands actions in the SJRA, but may do so indirectly. For example, issuance of oil and gas leases in GCNRA could require access across public lands, which would require BLM action.

DATA GAPS

Hazards (mine shafts) are identified by geographic area, but a site-specific inventory is not available. Agricultural trespass is known to occur in the SJRA, but a trespass program cannot be implemented before a field inventory is completed.

RESOURCE CAPABILITY ANALYSIS

PRESENT DEMAND AND CAPABILITY TO MEET DEMAND

Rights-of-way to oil and gas leases and private lands, along with R&PPs for community expansion, constitute the primary demand for land use permits and authorizations in the resource area. These activities, along with occasional sales and other miscellaneous leases and permits, have required approximately 20 to 22 work months per year (for subactivities 4211 and 4212 combined) over the past 3 years (since 1982). Withdrawal review (subactivity 4213) required 1 work month in 1984.

Industrial, municipal, and agricultural demands for lands actions are discussed separately.

Industrial

The resource has met the demand. Existing rights-of-way have formed undesignated transportation and utility corridors through the resource area from the state line in the Ucolo area northwest through Lisbon Valley into the Grand Resource Area; from Mexican Hat east and north to the Grand Resource Area; and up Montezuma Creek from the boundary of the Indian reservation to Monticello, with interconnections from Montezuma Creek to the state line (see the section on current management practices and planning guidance in this chapter). The resource area is limited by topographic and ownership patterns (i.e., the Colorado River to the west and the Indian reservation to the south), so that utility and transportation corridors have been established by need (cross-reference: Topography, Part I). There is minimal demand for communication sites, major changes to the transportation plan, or major utility systems.

Municipal

The only community expansion needs considered here are those of communities within and bordering the SJRA. Major communities in the SJRA include Monticello, Blanding, Bluff, Mexican Hat, Montezuma Creek, and Eastland. Table 4211-12 presents population and acreage estimates by community. Monticello, Bluff, and Eastland are surrounded by private lands, have vacant lands within the community, and have very low population densities. No community expansion needs have been identified for these communities. Blanding, Mexican Hat, and Montezuma Creek have been identified as possibly having community expansion needs.

Public lands abut western Blanding; however, Blanding has a low population density, available vacant lands within the community, and private lands to the north, east, and south.

Mexican Hat has an estimated population of 500. Approximately 20 private land owners own 1,700 acres in and around the town. Most of this land is undeveloped, and population density is low. However, two land owners control over 75 percent of the acreage, and frontage property is limited. Frontage property is controlled by eight owners, one of which is an estate. Land sales and purchases are infrequent in such a small community. Compounding the problem of a limited market, especially for commercial frontage property, the estate controlling much of the commercial frontage only leases property. The problem of acquiring ownership of frontage property is also compounded by the fact that a large strip of suitable frontage property is public land. According to BLM appraisals, the estate lease arrangements are comparable to frontage property ownership costs elsewhere in the county. Although there appears to be adequate private property to support community residential, commercial, and infrastructural needs, the distribution of property, especially frontage property, is causing imperfect market conditions.

Most of Montezuma Creek is on the Navajo Indian reservation. Land in the area is either allotted to Indians or leased. Most commercial property in town and residential property for non-Indians is leased from the BIA. Although the reservation does not restrict ability to lease commercial or residential lands, there may be a demand for owning lands that is not satisfied through leasing. Currently, seven property owners own a combined total of 63 acres near the town.

In 1984 BLM sold 25 acres of land to the private sector, which will partially alleviate the problem in Montezuma Creek. There is still no development on 23 acres of this land (as of July 1986).

Municipal demand for land is defined as the amount of land users are willing to purchase at a specified price, time period, and condition of sale. Therefore, the quantity of public land demanded for municipal uses depends on these three factors. However, given the availability of private lands in Mexican Hat, Blanding, and near Montezuma Creek, most municipal land demands can be supplied by existing private lands.

Even though the quantity of public land demanded at existing market prices is thought to be low, available private land may not be as suitable for certain types of uses as are public lands. Also, private ownership of some isolated parcels of public land may be demanded where these public lands constrain the use of adjacent private lands.

Community expansion requests are being met, except for the town of Mexican Hat. The residents of Mexican Hat have continually requested that adjacent public lands be made available for sale because private lands in the area are priced higher than residents wish to pay. However, disposal of these adjacent public lands is not allowed because they are in a KGS, which precludes disposal of the surface estate (cross-reference: Oil and Gas Leasing, Part II).

Agricultural

Production from rangelands and woodlands is usually compatible with multiple use management on public lands. However, cropland production on public land requires a lands action. The amount of land under crop production increased between 1969 and 1978, but dropped sharply in 1982 (see table 4211-13). Most of the fluctuation was due to nonpastured cropland. Despite the decrease of land under crop production, there remains some incidental cropland production on public lands associated with production from private lands. This unauthorized use is not being leased under 43 CFR 2920 because of BLM budget restraints, which have prevented completion of a cultural resource inventory, required by law.

Because of requirements for mitigation of adverse impacts to cultural resources, the SJRA is not meeting the present public demand for leases or sales to the extent to which it could be met if cultural resources were not present.

FUTURE DEMAND (UNTIL 2000) AND CAPABILITY TO MEET DEMAND

Aside from the price, the most important detriment for municipal land demand is population. Due to depressed economic conditions, San Juan County has recently experienced significant outmigration and, between 1983 and 1984, an actual population decrease of 1 percent. However, San Juan County's population is projected to grow by 18 percent by the year 2000, an annual growth rate of 0.9 percent. Available private land in and around communities in San Juan County and the existing vacant infrastructure due to local economic conditions should be adequate to supply municipal land demands through the year 2000. However, public lands may be desirable for municipal

use where available private lands are not as suitable for certain land uses as public lands are, and where public lands constrain adjacent private land uses.

There should be no problem in meeting the demands for community expansion. There is potential for either a 43 CFR 2912/2740 R&PP lease/patent, a 43 CFR 2920 lease, or a 43 CFR 2710 public sale in those communities adjacent to public lands. While disposal is precluded at Mexican Hat, leases for community or private purposes could be allowed.

The demand for agricultural land is expected to grow in proportion to growth in the agricultural sector. Employment in southeastern Utah's agricultural sector (Carbon, Emery, Grand, and San Juan Counties) is projected to decline by 0.9 percent a year, a 14 percent decline by the year 2000 (Utah, 1984). However, agricultural productivity will increase, and therefore, agricultural output should remain static.

Because the agricultural sectors of San Juan County and the other counties in southeastern Utah should experience similar changes, the local demand for agricultural land in San Juan County should remain static. Also supporting this conclusion is the historical trend of gradually declining farm acreage in San Juan County (see table 4211-13).

Future demands for agricultural lands may be greater than projected if additional agricultural lands are made available at below market prices, and if the cost of developing additional agricultural waters is subsidized.

Agricultural expansion will continue to be constrained, primarily by conflicts from cultural resource management.

The demand for new communication sites and for changes in the transportation plan and utility systems is expected to remain minimal for at least 15 years.

Resource area funding is expected to remain at about 20 work months for rights-of-way and other lands actions and 1 work month for withdrawal review.

CRITICAL THRESHOLDS

While the lands program does not have critical thresholds, land actions can result in critical thresholds for other resources. For example, disposal of lands with high recreational values could create a significant impact on the recreation program.

MANAGEMENT OPPORTUNITIES AND LIMITATIONS

ADEQUACY OF CURRENT MANAGEMENT

Overall, the lands program functions smoothly. The program has adapted to the legal constraints, and management of the lands appears to be effective.

Encroachment onto the public lands for agricultural use will continue until BLM funding is available to conduct an inventory and allow a leasing program. It does not appear to be unwillingness on the part of the public to comply with the law, since individuals have approached BLM about a possible lease or sale. Unauthorized use, even though minimal, is increasing and could result in the eventual loss of surface resources.

Management of the public lands is eased where the ownership pattern blocks up public lands. Isolated parcels are more difficult for the BLM to manage because they are not suited to many of the dispersed uses of the public lands found within the SJRA.

MANAGEMENT OPPORTUNITIES

The Area Manager has the opportunity, through the planning process, to establish criteria for determining whether disposal of public lands is in the national interest. Public lands in the SJRA are suitable for disposal if

(1) the land meets one of the three criteria in Section 203 of FLPMA;

(2) the land is not needed for other resource management and development such as wilderness, grazing, or recreation, as identified in the RMP.

The RMP can identify parcels available for specific types of disposal. However, a case-by-case analysis is required to determine suitability.

Areas identified as having serious conflicts among existing or potential surface uses can be withdrawn from various forms of appropriation or other surface uses. Withdrawals cannot be made through the RMP, but the RMP can serve to identify areas where withdrawals would be in the best national interest, and to recommend these areas to be withdrawn, along with the terms of the proposed withdrawal. Conversely, the RMP can serve to recommend areas where withdrawals from specified uses or appropriations would not be in the best national interest.

The Area Manager has the opportunity to propose alternative lands actions where certain actions, such as sales, are precluded. Where a mining claim, KGS, endangered species, or cultural resources are present, a short-term permit could be a solution, with proper mitigation of the conflicting resource. This type of opportunity would be in response to proposals on a case-by-case basis and cannot be anticipated through the planning process.

ACEC POTENTIAL

No potential ACECs have been identified for management of lands actions in the SJRA. Management of lands actions is not believed to require special management to protect critical environmental concerns or natural hazards. The criteria of significant relevance and importance (43 CFR 1610.7-2) are irrelevant to the disposition of public lands under the realty programs.

CONSTRAINTS FROM OTHER RESOURCE MANAGEMENT PROGRAMS

Lands disposal and certain other lands actions are constrained by management of cultural resources. The expense of a cultural resource inventory or mitigation of identified sites can be prohibitive to a prospective purchaser or permittee. Creative solutions, such as privately funded mitigation or mitigation by a permitted university, are needed so that the cultural resource program does not lead to the retention of lands otherwise suitable for disposal (cross-reference: Natural History/Cultural Resource Management, Part II).

A possible solution is to more clearly identify which cultural sites are significantly rare on public lands. Possibly, through either recordation or minimal site work, such as testing but not excavation, disposal of the site could be allowed. This could be addressed in an MOU between BLM and the SHPO and the Advisory Council on Historic Preservation in accordance with 36 CFR 800. While BLM could act to facilitate these types of solutions, the action would be administrative rather than planning oriented.

Minerals programs constrain disposals and other types of actions such as R&PP patents. Mining claims prevent disposals or other land entries because the mineral entry carries a prior right to patent (cross-reference: Mining Law Administration, Part II). A KGS also precludes disposal of the surface estate (cross-reference: Oil and Gas Leasing, Part II). An alternative for the sale program that might be available is re-evaluating KGSs to see if boundaries are still valid. In some places it is possible that the designation could be removed or boundaries altered. Until this occurs, some allowable surface actions could be authorized under lease instead of sale. Designation or revocation of a KGS is not handled at the resource area level, so is beyond the authority of the RMP. Revocation could be recommended administratively.

The Endangered Species Act would preclude lease or sale of land unless the species would be benefited by the action. However, so few species of plants and animals are listed or proposed in the resource area that conflicts are minimal and are solved on a case-by-case basis (cross-reference: Vegetation and Wildlife, both in Part I).

UT-83-150 provides revised state woodland product disposal policy which includes the de-emphasis on free use.

UT-84-73 provides further recommendations on the disposal of wood products in lieu of chaining an area.

Moab District IM UT-060-83-08 outlines formal district policy on firewood disposal.

Moab District Bulletin UT-060-84-B-137 contains recommended procedures for establishing green wood cutting areas.

RESOURCE ALLOCATIONS

In the past, BLM has issued free use permits for collection of dead wood. In 1983, the State Director notified the districts that free use was to become allowed only where demand for domestic sales had ceased or where wood products had no in-place commercial value.

BLM policy now is to sell, either by bid or by permit, forest products that are in demand. Green wood and lumber are usually offered for sale by bid to establish fair market value. Although dead wood, posts, and Christmas trees are typically sold by permit, a bidding procedure is recommended when there is competition for commercial use of the product.

Rates are established by BLM Manual 5423; however, it is BLM policy to get as much for the product as the market will allow. Live specimen plants are also sold by permit. Pinyon nuts are free if gathered for personal consumption; otherwise they are subject to permit.

The BLM has authority to identify and establish areas for various types of permits and sales. This can best be done from inventory data that identify product density, regrowth potential, and rotation times. In the absence of such an inventory, permit areas are developed where other resource conflicts do not impose restrictions. The RMP can determine which portions of the resource area are clear of most resource conflicts. Designated permit areas will be chosen from the cleared portions, based on product availability and site accessibility, in an attempt to service major population centers and heavy use areas.

CURRENT MANAGEMENT PRACTICES AND PLANNING GUIDANCE

Because all of the woodland area is classified nonproductive (noncommercial), management for marketable products is generally restricted to firewood, posts, and Christmas trees.

Productive or commercial forest land is land that is producing, or has a site capable of producing, at least 20 cubic feet per acre per year of commercial tree species. The SJRA has no stands on BLM land that are capable of producing timber commercially. Although they are noncommercial timber lands,

opportunity exists for the land manager to consider alternatives to past chaining practices when assessing future land treatment proposals. This could be done through a site-specific EA instead of through the RMP.

Designated free use areas should be eliminated to conform to BLM policy. Free use can be accommodated on an individual basis when appropriate, such as for nonprofit organizations.

Prior to removing products for land treatment purposes, the vegetative material could be offered for sale. If no commercial demand is expressed, the products could be given away via free use permits. Two years are needed for necessary planning, advertisement, and harvesting before wood products are disposed of by land treatment or until it is determined that there is no demand for the wood.

Existing chainings could be made available for Christmas tree harvesting prior to maintenance by burning. Future proposed chainings could be made available for green wood cutting prior to, or in lieu of, actual chaining. Such an area could be used first for a commercial green wood sale, second for a juniper post cutting area, and then for private harvesting of dead wood in an area that by that time would be open and accessible. The area could then be maintained by allowing Christmas tree harvesting of new growth or by letting the area regenerate naturally as new sites are opened up for the same sequence of use.

Interest has previously been expressed in using pinyon-juniper woodlands for more unconventional products such as pulp and papermaking, juniper oil, and manufacture of various fragrances. Reports have been written on these possibilities but, although opportunities still exist, recent interest has not been evident. This type of use would be addressed on a case-by-case basis and cannot be anticipated through the planning process.

ACEC POTENTIAL

No potential ACECs have been identified for the forest resource in the SJRA. (Relict plant communities are discussed under 4322 Grazing Management.) The forest resource present is not believed to require special management to protect critical environmental concerns. The resource value of the in-place forest resource does not fulfill the criteria of significant relevance and importance (43 CFR 1610.7-2).

CONSTRAINTS FROM OTHER RESOURCE MANAGEMENT PROGRAMS

Some constraints are placed on the forestry program by range management (cross-reference: Grazing Management, Part II). The timing of chainings or chaining maintenance operations does not always maximize the woodland products on lands being treated.

Archaeological constraints are also a routine consideration (cross-reference: Natural History/Cultural Management, Part II). Lithic scatters and other archaeological discoveries frequently preclude the harvesting of products from areas encompassing such sites. The amount of wood products isolated by this constraint is generally not significant.

resource area (cross reference: Wildlife Habitat Management, Part II). These areas are generally accessible to livestock and are heavily utilized because of their lush vegetation, available water, and shade.

Poisonous and Noxious Plants

Poisonous and noxious plants are present throughout the resource area, but generally do not occur in concentrations that would pose a significant threat to livestock. Poisonous plants that occur include locoweed (Astragalus spp.), deathcamas (Zigadenus paniculatus), copperweed (Oxytenia acerosa), halogeton (Halogeton glomeratus), greasewood (Sarcobatus vermiculatus), larkspur (Delphinium spp.), and Gambel oak (Quercus gambelii). Copperweed and grass tetany poisoning from spring grazing on crested wheatgrass have been the main sources of stock losses. One instance of a loss of 24 cattle from copperweed poisoning in 1967 is the most serious instance known (BLM, 1976). Losses from grass tetany are estimated to be fewer than 5 head per year.

Ecologically unique areas include some of the isolated mesa tops scattered throughout the area. These could be considered relict areas, since inaccessibility limits or precludes livestock and wildlife grazing. Van Pelt's study (1978) of some of these areas contains specific information. Hanging gardens along seeps in canyons contain unique species confined to limited habitats. Holmgren (1976) described some of these plants.

Ecological Condition and Trend

The ecological condition of each allotment is shown in table 4322-1. Ecological condition is a measure of the present state of vegetation on a site in relation to the climax plant community for that site. The four classes used to express ecological condition are early seral, mid seral, late seral and climax. Ecological condition is not to be confused with range condition. Range condition is a measure of the presence of desirable forage species in a particular area for livestock or wildlife. Range condition is generally rated in three classes: poor, fair, and good.

Range condition and ecological condition may not be the same for a given site. For instance, a pinyon and juniper site may be in late seral or climax ecological condition but in poor or fair range condition. This is because the closed canopy limits production of livestock or wildlife forage.

Ecological condition, rather than range condition, is used in this document.

Monitoring studies are being established on many allotments so that trend can be determined over the next 5 or more years.

Water

Livestock water is generally scarce over the entire area. There are numerous reservoirs, but they are generally not dependable. Most of the water supply for these reservoirs comes as runoff from rainfall in summer and fall, but

this is relatively unpredictable. Very often the water collected in these reservoirs has seeped out because of poor water holding capability of the soil, or has evaporated by the time livestock enter the area. Springs, wells, and pipelines are more reliable; however, in many areas these types of developments are not possible. Constructed rock tanks are somewhat more successful than reservoirs, because they generally (1) have a smaller area of water surface exposed to evaporation, (2) can be more easily sealed from leakage, and (3) have a less permeable slickrock watershed apron.

Water wells provide dependable water where they occur, but they are not numerous. Many developed wells are the result of water encountered in drilling for uranium or oil and gas. Drilling for water in much of the resource area has a low success rate because the underground strata are too fractured to collect water or the aquifer is so deep that pumping is not economical (cross-reference: Water, Part I).

Bureau Manuals

1603	The Bureau's policy is to provide forage to help meet needs of the nation, to help stabilize the economy of the livestock industry, individual users, and dependent communities.
1621	Allotment categorization.
4100-4400	Grazing administration manual and handbooks.
7311 & 7400	Criteria and guidelines for chemical and mechanical weed and brush control and reseeding.

Instruction Memorandums

IM 83-428	Examples of ways to reduce cost and improve quality of RMP/EIS documents.
IM 85-73	Guidelines for standardization of rangeland inventory and monitoring activities (ecological site concept).

Memorandums of Understanding

The umbrella MOU between BLM and NPS (September 4, 1984) establishes grazing management responsibilities in units of the national park system and in GCNRA.

Supplement No. 1 to an MOU between the NPS USO and the BLM USO (September 26, 1973) pertains to grazing management in GCNRA.

RESOURCE ALLOCATIONS

BLM administers grazing on units called grazing allotments. These were established during the adjudication period in the early and mid 1960s. Allotment boundaries are defined by topography and fences. An allotment is assigned for use by a single permittee or a group (sometimes organized as a grazing association).

A permittee may not graze livestock on BLM lands without authorization. This authorization is an annual grazing license or 10- year-term grazing permit which is renewable annually to the same grazing permittee, so long as he abides by the grazing regulations.

A permittee continues to use the same allotment year after year unless he (1) loses his grazing privilege because of serious infractions of the grazing regulations; (2) transfers his grazing privilege to another permittee; or (3) leases or sells his base property.

Grazing privileges are attached to base property (private or state land used as a base for the grazing operation) and stay with the base property through change of land owners unless the privileges are transferred off the base property.

Allotment boundaries can be changed to combine allotments or parts of allotments due to transfer of grazing privileges or changed to correspond to natural or cultural barriers to livestock. This is an administrative agreement and is not done through the planning process.

Allotment Management Categories

All grazing allotments in the SJRA are categorized to establish priorities for distributing available funds and personnel to achieve cost-effective improvement of rangeland condition and production. This process is called selective management and will put the emphasis (work force and dollars) on those allotments with the most need and where the most positive benefit could result from public investment. The resource area groups similar allotments into one of three management categories based on the following criteria:

(1) Maintain (M): (a) resource production potential is moderate to high, present production is near potential; (b) no serious resource use conflicts exist; and (c) opportunities may exist for positive economic return from public investments.

(2) Improve (I): (a) resource production potential is moderate to high, present production is low to moderate; (b) serious resource use conflicts are present; and (c) opportunities exist for positive economic return from public investments.

(3) Custodial (C): (a) resource production potential is low, present production is near potential; (b) limited resource use conflicts may exist; and (c) no opportunities exist for positive economic return from public investments.

The current management category for each allotment in SJRA was shown in Table 4322-1.

CURRENT MANAGEMENT PRACTICES AND PLANNING GUIDANCE

The SJRA administers grazing on 69 allotments held by 58 permittees (see the Grazing Allotments overlay and table 4322-1). Approximately 17,300 acres in

the Peters Canyon and East Canyon areas have been allotted to wildlife (see the grazing allotments overlay).

Base properties for BLM grazing operations are generally private lands in San Juan County, Utah with some in southwestern Colorado. In some instances, leased State of Utah lands are utilized as base property.

The Monuclo and Willow Creek allotments are entirely in Colorado, but are managed by Utah because of their proximity to the SJRA office and because the operator resides in the SJRA. They were included in the San Juan/San Miguel RMP/EIS completed by BLM's Montrose District, Colorado in December 1984. Two other allotments straddle the state line, with Utah responsible for grazing management of the Bug-Squaw Canyon Allotment and Colorado responsible for the Squaw Canyon Allotment (BLM, 1982). However, for planning purposes, the state line was used as the boundary, so the Colorado portions of both allotments were included in the San Juan-San Miguel RMP/EIS. The Utah portions of these allotments are included in the San Juan RMP/EIS.

The SJRA also administers grazing on the Hurrah Pass Allotment, part of which is in the adjoining Grand Resource Area of the Moab District, and on the East Summit Allotment which is entirely in the Grand Resource Area. Both of these allotments are included in the San Juan RMP/EIS.

The BLM has the responsibility to administer grazing within GCNRA. This responsibility was given in Public Law 92-593 and clarified with later MOUs between the two agencies (BLM and NPS, 1973 and 1984).

All allotments in this resource area except one are presently used by cattle (see table 4322-1). Season of use on most allotments is fall, winter and spring. Twenty-one allotments, or 3 percent of the resource area allotted (on both BLM and GCNRA) acreage, have summer use. Four allotments, or 11 percent of the resource area allotted acreage, are licensed for year-round use. These are generally smaller allotments of less than 2,600 acres, except for one which is approximately 226,000 BLM and GCNRA acres.

All of the allotments were adjudicated in the 1960s based on range surveys conducted at that time. This generally resulted in a reduction in active preference of 10 to 50 percent on about half the allotments. Four allotments in the old Montezuma Planning Unit actually received increases in active preference of 20 to 250 percent. A few allotments were proposed for reductions, but these were never made (Perkins Brothers and Indian Rock Allotments). Spring grazing was generally not eliminated by adjudication. At least one allotment (Lake Canyon) with summer grazing had that season eliminated in the early 1970s.

All allotments in the SJRA have been categorized. Table 4322-2 summarizes allotment categorization.

Allotment Management Plans

There are nine AMPs in the resource area that were written in the late 1960s and early 1970s. Seven are no longer followed to the letter of the plan because of changes in land status and operators, limited project funding, moratoriums against vegetation treatments, and the fact that some plans have been found to be unworkable. Informal changes have been made to compensate for these situations, but the AMPs have not been formally revised. AMP status is shown in table 4322-3.

Range Improvements

Land treatment and management facilities in the area serve to provide additional livestock forage; make unusable areas usable (addition of water and access); provide for more uniform distribution of livestock; provide for more intensive management, including rest periods for improved ecological condition; and aid in control and handling of livestock (cross-reference: Land Treatments and Management Facilities, Part I).

These facilities have been funded and constructed either (1) entirely by the grazing permittees, (2) entirely by BLM, (3) with use of Grazing Advisory Board funds (a 12.5 percent amount derived directly from paid grazing fees), or (4) by a combination of any of these sources.

Generally the grazing permittees have maintenance responsibility for most structural improvements such as fences, wells, and reservoirs, while BLM has maintenance responsibility for nonstructural improvements such as seedings. This type of maintenance assignment was stated in the Bureau's Final Rangeland Improvement Policy (BLM, 1982b).

Approximately 5,200 acres of existing seedings have been treated or maintained with prescribed fire or herbicides, but no new seedings have been initiated since 1972. This is the result of a moratorium on chainings (cross-reference: Forest Management, Part II) issued by Utah BLM in 1971 and the 1974 Natural Resources Defense Council lawsuit (NRDC, 1974) which forbade any new land treatments prior to completion of an EIS. The EIS prepared as part of this RMP will fulfill this requirement.

During this time, grazing permittees have still been interested in completing chainings and seedings to improve the quantity and quality of livestock forage. In some cases, permittees have been willing to fund these projects at their own expense.

Transportation

Trailing of livestock is not as common as it once was. Many operators now truck their livestock rather than trailing them. Trailing use that now occurs

Allotments with potential to respond to livestock manipulation techniques are shown in table 4322-14. Those with potential for vegetation treatments are shown in table 4322-15.

Future demand for public rangeland forage will depend upon the future demand for beef and on the future production relationship between beef and rangeland forage. Beef consumption reached on all-time high in 1967 (120 pounds per capita). It is doubtful that per capita consumption will ever reach previous highs, so beef consumption is likely to increase at the same rate as population growth (0.7 to 0.8 percent annually). Per capita consumption of sheep related products has been decreasing.

Although cattle numbers in the Western States have remained fairly stable for the past 10 years, use of public rangeland forage in the Western States and in the SJRA has been decreasing. Both more intensive use of private property and increased use of feedlots could be responsible. Consumer preference for leaner red meat is expected to decrease the use of feedlots and increase the demand for public rangeland forage. Although herd sizes in the Western States are not expected to increase further, the trend toward production of leaner meat may encourage more cow-yearling operations and thereby increase the demand for public rangeland forage, particularly during winter and spring. Demand for sheep rangeland forage is expected to remain static (Drabenstott and Duncan, 1982; National Cattlemen's Association, 1982).

CRITICAL THRESHOLDS

The critical threshold level of forage production, or the maximum level of forage production that could be utilized by livestock and still maintain sustained yield of vegetation, is difficult to quantify. This level is probably somewhere between the level of the past 5 years average licensed use and active preference. This critical threshold level will be quantified by monitoring over the next 5 to 10 years (1990 to 1995).

MANAGEMENT OPPORTUNITIES AND LIMITATIONS

ADEQUACY OF CURRENT MANAGEMENT

The trend of the range in the SJRA cannot be determined prior to evaluation of monitoring studies over the next 5 to 10 years (prior to 1990 or 1995). However, in some aspects, current grazing management does not appear to be adequate.

AMPs give specific guidance for management of a grazing allotment. Within SJRA, seven plans need revision, but this has been postponed over the past several years, pending completion of soil and vegetation inventories and the RMP/EIS.

Distribution of use has been uneven in some allotments. Problems are associated with access to livestock forage or availability of water. Where water is hauled in, the permittee sometimes has problems with vehicular access

Development of stock watering areas and improved access for livestock to inaccessible areas are also possible on some allotments.

Season of use changes to incorporate rest and allow recovery of plant vigor could be implemented with grazing systems on some allotments. In many cases, fencing and water developments would be required to implement the system.

Within the resource area, most of the seedings are losing their value for grazing because they are reverting to nonforage vegetation. They need to be treated within the next 5 to 10 years to control reinvasion of trees and shrubs, if their usefulness for livestock grazing is to be maintained.

These types of management opportunities can be achieved through AMPs expected to be prepared as an end product of the RMP process. The RMP can identify allotments where AMPs could be developed, and the RPS prepared as part of the RMP/EIS process can serve to summarize problem areas within specific allotments. The RMP can also serve to identify areas where grazing use or range improvements should not be allowed, to protect other surface resources and uses.
Some allotment boundaries may need to be adjusted. This can be done administratively and is not part of the RMP process.

ACEC POTENTIAL

Several areas within the SJRA could probably qualify for ACEC designation to recognize and protect rangeland resources. These potential sites are the mesa tops that are isolated, or relatively so, from man's activities. These areas could serve as relict or comparison areas for similar ecosystems in the resource area or outside it. The two best known possibilities that have been studied to some degree in relation to such a designation are Lavender Mesa and Bridger Jack Mesa. Other isolated mesas may have similar ACEC potential, but not enough is known about them to make a recommendation for ACEC designation.

Other ecologically unique areas in the SJRA include hanging gardens along seeps in canyon walls. These are small, localized areas that have not been mapped and are not believed to meet ACEC criteria of relevance and importance. Accordingly, none have been recommended as ACECs.

The following two areas have been found to have potential for ACEC designation:
Lavender Mesa and Bridger Jack Mesa.

Lavender Mesa

Lavender Mesa (640 acres in T. 31 S., R. 21 E., shown in figure 4322-2) is isolated, inaccessible to man and herbivores by ground routes. Even small mammals such as rabbits and mice appear to be absent. Most of the mesa is a pinyon-juniper woodland with a small (20-acre) sagebrush-grass park.

The vegetative community is unique because it has developed without the influence of grazing animals and most other mammals. It therefore has value

Executive Orders

EO 11644, Use of ORVs on Public Lands, establishes policies and procedures for control of ORV use on public lands to protect resources, promote safety, and minimize conflicts.

An amendment to EO 11644 and court decisions give federal agencies the authority to close or limit areas or trails to ORV use when necessary to protect soils, vegetation, wildlife, wildlife habitat, cultural or historic resources, or public safety.

Regulations

Regulations for special designations of areas and sites are found at 43 CFR 2070 (see also 43 CFR 8223 and 8352).

Regulatory direction for specific recreation programs (e.g., policy, authority, use permitting, etc.) is found at 43 CFR 8000 thru 8372.

Management of ORV use is regulated under 43 CFR 8340. Implementation of these rules will provide for continued ORV use under conditions that will protect natural resources, promote safety, and minimize conflicts among various land uses.

Memorandums of Understanding

A cooperative management agreement for recreational use of the San Juan River from Mexican Hat to Clay Hills Crossing between the Moab District and GCNRA was signed in 1979. The SJRA administers the permitting process, both commercial and private, and other resource management actions are cooperatively determined.

RESOURCE ALLOCATIONS

The BLM is required to allocate ORV use by designating all the lands within the resource area as open, closed, or limited for ORV use (see 43 CFR 8342). This is done through the RMP process by resolving conflicts among various surface uses in the RMP/EIS. The designations do not distinguish between recreational and nonrecreational ORV use.

The RMP could also serve as a basis for designation of RNAs (43 CFR 8223) or ONAs (43 CFR 8352) (cross-reference: Natural History (Cultural Resource Management, Part II).

Additional allocations that could be made include the designation of SRMAs and ROS opportunity classes.

SRMAs are designated administratively by the Area Manager under 43 CFR 8372.0-5. These are areas recognized as requiring special management and control to ensure their protection. Examples are areas where intensive management actions are required to reduce resource damage, solve visitor health and safety problems, mitigate conflicts, or provide the public with

TABLE 4333-1

ROS Classes, by Area (approximate acres)

AREA	Acres, by Opportunity Class						Area Total
	P	SPNM	SPM	RN	R	U	
Existing SRMAs							
San Juan River SRMA	0	0	9,830	5,100	130	40	15,100
Grand Gulch Plateau SRMA	69,700	195,600	37,200	82,500	0	0	385,000
Dark Canyon SRMA	38,550	23,490	0	0	0	0	62,040
San Juan Extensive RMA	90,270	293,370	280,630	637,910	14,590	280	1,317,050
TOTAL EXISTING	198,520	512,460	327,660	725,510	14,720	320	1,779,190
Potential SRMAs							
Indian Creek SRMA	6,540	22,980	27,520	22,960	0	0	80,000
Beef Basin SRMA	13,950	26,710	25,790	0	0	0	66,450
Montezuma Creek SRMA	0	0	0	5,300	0	0	5,300
SUBTOTALS	20,490	49,690	53,310	28,260	0	0	151,750
Revised San Juan Extensive RMA[a]	69,780	243,680	227,320	609,650	14,590	280	1,165,300
TOTALS	90,270	293,370	280,630	637,910	14,590	280	1,317,050
TOTAL PROPOSED	198,520	512,460	327,660	725,510	14,720	320	1,779,190

[a]Represents the remaining acreage. The total acres for potential SRMAs plus the acreage for the revised San Juan Extensive RMA equals the acreage of the existing San Juan Extensive RMA given above.

The basic criteria for management of the San Juan River were outlined in the Federal Register (page 3642) published January 15, 1981 titled "Utah; River Running Recreation Use Permits and Allocations; Updated Criteria and Procedures." This outlined the need for commercial and private permits, use limits, party size restrictions, and permit stipulations for resource protection and visitor safety (appendix 4333-B at the end of this chapter).

Use and Management

The use of the San Juan River has increased steadily by about 15 percent per year over the past 5 years (see table 4333-2). Use last year (in 1984) amounted to 33,599 user days; of this, 9 percent was commercial and 91 percent was private. This mix has remained fairly constant since 1980. The majority of use occurs from April 15 to July 15, when higher river flows occur; however, the river generally can be run year-round.

The seasonal ranger staff, which varies from one to four rangers, attempts to contact all rafting groups when they are putting in. They check for permit compliance, and these personal contacts are believed to be largely responsible for the generally good condition of the river corridor. This portion of the ranger job requires about 12 work months per year; however, for the past 3 years (FY 1982 thru FY 1984) funding levels have been below this figure.

The San Juan River has been listed as a potential study river in the NPS national wild and scenic rivers inventory. The Wild and Scenic Rivers Act would have to be amended before any NPS study could be started.

Facilities

San Juan River trips originate at three locations: Sand Island recreation site (77 percent), Mexican Hat (17 percent), and Montezuma Creek (6 percent) (see table 4333-3). The Clay Hills Crossing (in GCNRA), used as a takeout for San Juan River trips, is also used as a launch site for trips to Lake Powell.

The Sand Island recreation site is the only developed launch point on the river. It also serves as a camping and picnic area for local and nonlocal use not associated with river running. The site contains five camp units and two picnic units, each with picnic tables and grills. Informational displays, rest rooms, and garbage cans are also provided. During the months of April, May, and June the campsites are often full, and camps are set up in unauthorized locations at the recreation site. This period appears to be the main use season for both river runners and land based tourism, which causes the over crowding at the campsites.

The site is also used by the local population as a party spot, particularly on weekends. This results in conflicts with campers at Sand Island due to loud late-night activities. Vandalism, including driving off roads, littering, and destruction of vegetation (for fire building) is associated with this activity. On the cliff face within the campground are about 20 petroglyphs which have been vandalized with pecked or painted graffiti.

SMCRA of 1977 requires that measures be taken to assure that surface coal mining operations are so conducted as to protect the environment.

Bureau Manuals

The BLM Manual 8400 series dictates policy and procedures for the VRM system; outlines procedures for the inventory, evaluation, and classi- fication of visual resources on BLM administered publiclands; provides a framework for establishing guidelines for reducing visual impacts; describes the use of the contrast rating system in analyzing visual impacts; and describes the steps for portraying the visual resource requirements in EAs to determine whether a project can meet acceptable limits of impact on the visual resource.

Instruction Memorandums

UT-83-144 Directs that oil and gas facilities be painted in a uniform color that does not contrast with the surrounding landscape and provides a list of 10 standardized colors from which to select.

RESOURCE ALLOCATIONS

In order to classify visual resources, three determinations (or resource allocations) are required for each area: scenic quality, visual sensitivity, and distance zones.

Scenic quality is perhaps best described as the overall impression retained after driving through, walking through, or flying over an area. Scenery is classified as A, B, or C, with A being the most scenic.

Visual sensitivity, rated as high, medium, or low, is the degree of concern expressed by the user toward scenic quality and existing or proposed visual change in a particular characteristic landscape.

Distance zones are actual quantitative distances from any observation point or travel route (trail, road, or river), with three possible designations: foreground/middleground, background, and seldom seen.

All three resource allocations have been mapped on 1 inch to the mile maps which can be found with the VRM specialist at the MDO.

VRM classes, which are the net result of the inventory work, form the basis for visual input into management decisions. These are formulated considering the combination of scenic quality, visual sensitivity, and distance zones.

Objectives of the four classes are found in the draft VRM 8410 Manual, and are summarized as follows.

Class I Objective

The objective of VRM Class I is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.

Class II Objective

The objective of VRM Class II is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line color, and texture found in the predominant natural features of the characteristic landscape.

Class III Objective

The objective of VRM Class III is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate Management activities may attract attention, but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Class IV Objective

The objective of VRM Class IV is to provide for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location of the project, minimal surface disturbance, and repeating the basic landscape elements.

Contrast Rating

Through the contrast rating process, a determination is made as to whether or not a proposed project would meet VRM class objectives. A contrast rating is done in accordance with the draft VRM 8431 Manual.

The level of change as determined through the contrast rating process is measured against the VRM class objectives given above. To meet the objective for the area in which a project is to be located, the project's level of visual change must be equal to or less than the level of change allowed under the objective.

If the objective would be met, little mitigation is needed to reduce visual contrast. If the objective would not be met, reasonable and practical mitigating measures (which BLM management does not consider to be unduly economically restrictive) are applied to reduce contrasts as much as possible. The project is then approved with stipulations to implement the mitigation.

If, over time, sufficient projects occurred that did not meet class objectives, the scenic quality would be come degraded. At this point, the VRM class could not be maintained, and the class boundaries would have to be adjusted to shift the degraded area into a lower class.

CURRENT MANAGEMENT PRACTICES AND PLANNING GUIDANCE

Inventory work in SJRA under the VRM system was begun in 1978 and completed in 1984. Table 4333-17 lists the VRM report name, author, date of completion, and planning units covered. The resulting VRM classes for the SJRA are shows on the VRM Classes overlay, and their acreages are listed in table 4333-18.

The VRM allocations are reviewed periodically, when need for review is determined by the SJRA staff. Changes to scenic quality, visual sensitivity, and distance zones are based on changing field conditions, and the VRM class if adjusted accordingly. For example, in FY 1984, portions of the Beef Basin Planning Unit were re-evaluated and the sensitivity adjusted, which resulted in a change in the VRM class.

Most VRM work is done by private consultants and handled through the MDO, with input from the resource area.

All four MFPs are silent on VRM, except that the Indian Creek-Dry Valley MFP recommends examining management actions in Class II areas as seen from Hatch Point (in the Grand Resource Area), U.S. Highway 191, and developed recreation sites to protect the scenic resource.

TABLE 4333-18

Acreages in Each of the Visual Resource Management Classes

Class	Acres
Class I	93,533
Class II	525,289
Class III	620,834
Class IV	539,534

Source: Shiozawa and Larson, 1980.

Management of visual resources affects the revenues and costs of local taxing jurisdictions only as far as it affects other economic activities. Because the relationship between VRM and economic activities cannot be quantified, the local fiscal effects cannot be quantified.

CONSISTENCY WITH NON-BUREAU PLANS

The USFS, which has its own visual management system, manages its lands in a multiple use manner, as does the Bureau. Visual concerns are given equal consideration with other potential environmental impacts. VRM classes along BLM/USFS boundaries have been adjusted, where possible, to maintain consistent management across agency borders.

Visual resources have also been considered in the GCNRA Proposed General Management Plan (1979). Although the NPS has no designated VRM system, that agency appears to have adopted the BLM system, with some modification, by establishing different classes of scenery.

In the late 1970s, the visual corridor along highways U-95, U-261, U-263, U-276, and Notom Road was studied by an interagency group composed of federal, state, and county representatives. The group examined potential conflicts in use and development of lands along these highways.

The U-95 Highway Corridor Study states, "Preservation of the visual corridor is a vital issue in consideration of any use, management, or development scheme for the area."

The study recognizes the visual elements of the corridor and provides a basis for analysis of each specific proposed use or development. The approach envisions a continuing process of analysis of each proposal and allows for prohibiting the proposal or minimizing its impacts. All who have a vested interest in, or who have control over the use, management, or development of the land, must accept the premise that natural landscape values are worth protecting and that these values require a unified commitment to their preservation. The study acknowledges the need for some mechanism for review of proposals or standardized criteria for assessment against the visual resource values.

As a result of this study, BLM has coordinated with the State Land Board on chainings and other land treatments to minimize visual impacts as viewed from Highway U-261.

DATA GAPS

None identified.

RESOURCE CAPABILITY ANALYSIS

PRESENT DEMAND AND CAPABILITY TO MEET DEMAND

The current (1984) demand for visual quality or sightseeing might best be measured by the number of tour operators conducting business in the SJRA (cross-reference: Recreation Management at the beginning of this chapter).

Degradation of visual values is prevented where only those potential projects that meet VRM class objectives are approved.

The SJRA has been successful in meeting VRM class objectives in most cases. Current management is believed to be adequate.

MANAGEMENT OPPORTUNITIES

An opportunity for mitigation of irreversible and irretrievable commitments of visual resources is to use the BLM visual resource specialist in the initial planning and design of a project. Irreversible and irretrievable commitments of visual resources could be reduced through the application of the three principles of VRM: (1) minimizing disturbance, (2) careful location, and (3) repeating the natural elements. This, however, is an administrative concern which does not need to be considered in the planning process.

ACEC POTENTIAL

Lockhart Basin

An area of 62,420 acres (56,660 BLM and 5,760 State) has potential for ACEC designation under the VRM program. The area includes lower Indian Creek, Rustler, Horsethief, and Lockhart Canyons and is located basically between CNP and Hatch Point (figure 4333-3).

This area meets the two ACEC recommendation criteria set forth in draft BLM Manual 8410: it is scenic quality A, and unique or very rare within its physiographic province.

The special value identified is one of outstanding scenic qualities in terms of diversity of landform and colors present. The landform within the area is typified by outstanding rock formations, including rounded spires; high, truncated ledges; and cliffs. The colors, ranging from light pink and white sandstones along the lower Indian Creek area to the white, pink, red, and dark reddish-purple colors in the ledges and rock formations are outstanding. The color contrasts add to the scenic quality of this area, and some of the most spectacular rock formations in the U.S. are found here (Meiiji, 1980).

The scenic values found in the area are relevant because special management attention is required to prevent irreparable damage to them. The scenic values of this area are important to regional, national, and international travelers or tourists who view the area from the developed overlooks in the Canyon Rims Recreation Area. These overlooks and their estimated use (number of visitors in 1981) include Needles Overlook, 10,000; Anticline Overlook, 3,000; and Canyonlands Overlook, 100 (DOE, 1982). Comments in the visitor registers located at the overlooks include such remarks as "More scenic than the Grand Canyon," "Leave it as it is," and "Don't change it," etc.

The scarcity within the Colorado Plateau Physiographic Region of the combination of scenic qualities found in this area makes it an important resource that would be irreplaceable if damaged or destroyed.

No present land use threatens the scenic values of the area; however, exploration for uranium or oil and gas could adversely affect these values by creating substantially noticeable disturbances.

The land ownership of the area is primarily public lands, with state sections scattered throughout.

The western boundary of the area is CNP, where recreational use does not affect the scenic qualities described above.

Withdrawal from locatable mineral entry and application of a No Surface Occupancy leasing category for oil and gas development would protect the scenic values from irreparable damage that could be caused by these activities.

No other special designations would apply to protection of scenic values other than ACEC.

The NPS at one time considered enlarging the boundaries of CNP to include this area.

CONSTRAINTS FROM OTHER RESOURCE MANAGEMENT PROGRAMS

Management of visual resources is constrained by nearly all other resource management programs that propose surface disturbance or development of their respective resources in areas where VRM objectives cannot be met. If objectives are repeatedly not met, then the scenic qualities will be substantially reduced and the VRM class lowered through periodic reassessment by BLM VRM specialists. Lowering of the VRM class is inconsistent with the BLM's policy of protecting visual values.

Reassessment of visual resource values would probably coincide with the 5-year periodic review of the RMP; VRM classes would be adjusted at that time, if necessary.

DOCUMENTED PUBLIC CONTROVERSY

Public controversy over visual impacts from the Department of Energy's proposed baseline studies in the Gibson Dome area are documented in the final EA, with over 67 comments received.

A newspaper article in the Deseret News (Bauman, 1982) discussed the visual impact of temporary water tanks located at an exploratory drill hole in Gibson Dome.

Gas flares are also emitters of NOx, CO, particulate matter, and possibly SO_2, if the gas is not cleaned before it is flared. They are not generally considered a major source. In addition, any construction, road development activity, or sand and gravel operations are potential sources of particulate matter. Resulting particulate concentrations can be a local problem, particularly in calm wind conditions, but are not considered major pollution sources.

The entire SJRA is a Class II air quality area. However, CNP, located immediately adjacent to the SJRA, is a Class I area, giving it special protection against air quality degredation. Arches National Park and Capitol Reef National Park are two other Class I areas that are located within 10 and 20 miles, respectively, of the SJRA boundary.

To comply with the Clean Air Act Amendments, BLM listed both of the PAs in the SJRA, Grand Gulch and Dark Canyon, as having AQRVs that are important attributes of the area. BLM determined that these areas are worthy of class I protection. This determination was made solely on the basis of AQRVs as required by the Clean Air Act Amendments, paragraph 164D, and did not take into consideration the balancing of other significant management options, which would be done during the reclassification process if it were ever conducted.

The four MFPs are silent on air quality management and related concerns.

SOCIOECONOMIC CONSIDERATIONS

The following discussion concentrates on San Juan County, which is the primary impact area. Although public land related activities can affect other areas in southeastern Utah and southwestern Colorado, the preponderance of effects for most activities is confined to San Juan County. For a more complete description of the methodologies and assumptions used in this chapter, refer to the Economic Methodology section in Part III.

For the most part, air quality management is governed by state and federal regulations. BLM, in cooperation with the State of Utah, manages activities to maintain the air resource within the air quality standards prescribed by federal, state and local laws.

Tourism is the industry most dependent on the SJRA's air quality. The local importance of tourism is discussed in the Recreation chapter. Although tourism accounts for a sitnificant portion of the county's economic actibity, the proportion of this local economic activity that is due to the area's air quality cannot be quantified.

Several other economic activities rely on the SJRA's air resource, not for aesthetics, but as a medium for emitting pollutants. To this date (mid-1985) air quality management has neither prevented nor altered any economic activity in the SJRA. Most major polluting sources in the SJRA are from the mining sector, the local importance of which is discussed under the various mining programs. Although no economic activity has thus far been restricted by air quality management, major mining construction, manufacturing and utility development could potentially be affected in the future. The Area

Manager could also prevent prescribed fires to protect air quality values and recommend areas to the state for integral vista designations. Preventing prescribed fires could affect the livestock industry; an integral vista designation could constrain major mining construction, manufacturing, and utility developments.

If the area manager recommended that an area be redesignated to Class I status and the Secretary of Interior and either Congress or the state accepted that recommendation, all the restrictions discussed previously for Class I areas would be imposed on that portion of the SJRA.

Little or none of the governmental costs related to managing air quality in the SJRA contribute to local sales, income, or employment.

The air resource affects the revenues and costs of local taxing jurisdictions only insofar as the air resource affects other economic activities. Because the relationship between the air resource and economic activities cannot be quantified, the local fiscal effects of the resource cannot be quantified.

CONSISTENCY WITH NON-BUREAU PLANS

Management of the air resource must remain consistent with the SIP and the visibility portion of the SIP, which is currently being developed. The NPS is preparing a fire management plan that should be finalized in 1985. Consistent policy between the NPS and the BLM is not guaranteed. The NPS manages for preservation and recreation and is much more concerned about AQRVs on their Class I lands than BLM is on its Class II lands.

DATA GAPS

No air quality monitoring has occured within the SJRA.

RESOURCE CAPABILITY ANALYSIS

PRESENT DEMAND AND CAPABILITY TO MEET DEMAND

As has been discussed, air quality is quite good within the resource area. There is very little, if any, local demand to improve it. There are those, particularly the tourist industry and recreationists, who want more stringent controls in the way of integral vista designations, to protect existing air quality.

Extensive vista designations, if accompanied by stringent state regulations, could severely limit resource area management options involving major development of natural resources. Such regulations have not yet been generated, and the state is only now considering the right balance between protection and development.

The San Juan County Commission and most local residents are opposed to stricter controls such as vista designations, as was revealed in the November 14, 1984 scoping meetings. Stricter controls would also concern the few industrial interests in SJRA, because such restrictions would further constrain new development or expansion.

Action plans could be formulated after fire suppression areas are established. These would set the parameters for fire suppression actions for each suppression area.

ACEC POTENTIAL

No areas in SJRA qualify as an ACEC for fire management. An ACEC is designated to protect special values or recognized natural hazards. While fire management would be a tool to manage other special values in an ACEC, it does not qualify as a special value; and, while it may be a natural hazard, cannot be predicted or tied to a specific area in SJRA.

CONSTRAINTS FROM OTHER RESOURCE MANAGEMENT PROGRAMS

Management of cultural resources constrains fire management in that fire control lines must avoid cultural resources. While it is possible to avoid cultural properties when constructing fire control lines, the extra time required to determine whether such sites are present can delay suppression.

IMP constrains the type of suppression action that can be taken on approximately 387,000 acres or 20 percent of the resource area. Generally this means that suppression is with manpower and hand tools only. Fire vehicles, bulldozers, and fire retardant are used only after consultation with the Area Manager and IMP coordinator and if life or property are threatened.

DOCUMENTED PUBLIC CONTROVERSY

Fire management was an item of concern at public meetings held in April 1983 to identify issues for the San Juan RMP. Comments favored a "let burn" (or less than full suppression) policy on most fires unless life or property were threatened. Documentation is in the resource area central files.

TABLE 4333-18

Acreages in Each of the Visual Resource Management Classes

Class	Acres
Class I	93,533
Class II	525,289
Class III	520,834
Class IV	539,534

Source: Shiozawa and Larson, 1980.

TABLE 4211-5

Lands Actions Supporting Other Resource Management Programs

Lands Action and Site	Acres	Economic Activity Enhanced
Classified Lands		
Dark Canyon	57,430	Recreation
Grand Gulch	32,850	Recreation
Sand Island	254	Recreation
Arch Canyon	40	Recreation
Kane Springs	80	Recreation
Salt Creek	240	Recreation
Alkali Ridge	80	Recreation
Mormon Trail	1,116	Recreation
Butler Wash	40	Recreation
Withdrawals		
Public water reserves	5,460	Energy Development
	97,590	